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Art. I.—THE SPANISH DOMINATION IN LOUISIANA.

THE history of Louisiana, and particularly that portion which relates to it while under the domination of Spain, presents a world of romance and of thrilling adventure, such as can only be found where the Spanish character has thoroughly prevailed. Whoever reads the history of Spain and of the Spaniards since the expulsion of the Moors from the peninsula, cannot but perceive the striking and unique traits of character that a seven hundred years' contact with the followers of Mohammed has indelibly stamped upon the Spanish character. It is a genuine hybridity of character, partaking equally of the refined civilization of Western Europe, and of the semi-barbarous Mohammedan civilization of Western Asia. It is a character in which stands out in bold relief some of the darkest traits of the Moor, gently modified—though not sufficiently to conceal the source of it—by the softening influences of Christianity. There is just enough Moorish blood running in the veins of the Spanish race to give it all the wild adventure and romance of the Moorish character; while it takes away most of that love of gain, and of plodding commercial life and enterprise, which so much distinguish the French and Anglo-Saxon races. The Spaniard has no idea of plodding industry; he cannot think of tilling the soil, of turning the powers of nature into sources of wealth, and of accumulating riches by commerce. If it were so, Spain would long since have been one of the richest nations on earth, and her American colonies would never have left her; but her natural indolence of character prompted her only to make her American possessions sources of plunder.

Spain has conquered more of the earth's surface than any other modern nation; and her peculiar national character has also caused her to make the worst use of them. It was always

VOL. XVII.—NO. VI.

easier for the Moor to conquer than to make a good use of his conquests; and so it has always been with Spain.

The peculiarities of the Spanish character have completely spent themselves upon the soil of America. For about three hundred years Spain had, in the Western World, full sway—the widest possible field for a development of its national character. The results were left deeply written in the soil of the Great and Lesser Antilles,—of Louisiana, Mexico, Central America, Peru, and of every country in South America,—results full of treachery, rapine, inhumanity, cruelty, avarice, religious intolerance, and of every trait of the semi-barbarian Moor.

A host of historians have revelled in the wide field of Hispano-American adventure, war and romance, and furnished to the world some of the most lively and thrilling narrations that modern times can afford. These historians, however, have mostly been confined to Mexico and South America, while Louisiana has been comparatively neglected. The history of the Spanish race in that portion remains yet to be written. Its outlines, as yet, are all that have been given to the world. There remains to be done for Louisiana what Prescott has done for Mexico and Peru.

We are happy to be able to announce that the task of writing and illustrating the history of Louisiana while under the domination of the Spaniards, has at last been undertaken by the Hon. CHARLES GAYARRE, one of the most distinguished citizens of Louisiana. We have been favored with a portion of the proof-sheets of his forthcoming work,* which are now before us. They are replete with interest, and fully sustain the high reputation which the author has already acquired. The work is entitled *The History of Louisiana under the Spanish Domination*, its object being to record the history of Louisiana as a Spanish colony, from 1769 to the end of the year 1803, when she was transferred to the United States of America. The work is elaborate, and written in a style vigorous and graphic, suited to the dignity of history. This work, so much needed, so ably written, and so full in all the details of so interesting a theme, places its learned author among the first of American historians, if, indeed, his other historical works do not entitle him to that honor. His preceding work on the French domination in Louisiana, entitled *Histoire de la Louisiane*, is a production of high merit, and written in a classical and dignified style; but owing to its having been written in French, its merits have not been fully appreciated by the American public. Abroad and in Louisiana it has been received with the highest praise, and is admitted to be the best work that has ever appeared on the subject.

* It will, perhaps, appear before these pages see the light.

It will be recollected by those familiar with the history of Louisiana, that in 1762 it was ceded to Spain by France, and that in consequence of the unwillingness of the colonists, Spain had great difficulty in getting it into its possession. These difficulties are fully detailed in Mr. Gayarre's *Histoire de la Louisiane*.

We have often been struck with surprise at the almost entire exclusion of the history of Louisiana from all of our numerous histories, so called, of the United States, and particularly those designed for schools. This omission has very naturally led to the conclusion that there was nothing in the history of Louisiana that could be of much interest to the reader; when, in fact, the history of no part of the United States is more interesting. We will not even except New-England, New-York, or Virginia, to whose histories so large a place is assigned in all of our books.

In 1766, two years after the cession, the Spaniards made an attempt to get possession of their new territory, but only partially succeeded, for soon after their arrival the colonists rose in insurrection in 1768, and drove them out of the country. The next year, the arrival of Governor O'Reilly, with an overwhelming force, avenged the insults offered to his Catholic Majesty, punished the leaders of the insurrection, and brought the province under complete subjection to Spain.

Having secured the obedience of the colonists, O'Reilly's next step was to organize a new government; and in doing this, he sought, as much as possible, to efface all traces of the old one. For the old French Superior Council he substituted a *Cabildo*, or Municipal Council, composed of six perpetual *Regidores*, or Aldermen, two ordinary *Alcaldes*, or city magistrates, an Attorney-General Syndic, and a clerk, over which body the Governor presided in person.

To fill the places of perpetual *Regidor* and clerk, those offices were put up at auction and sold to the highest bidder, and the purchaser "was declared to have the faculty of transferring his office to a known and capable person, from whom he was permitted to require in payment one-half of its appraised value; but one-third only could be received on any subsequent mutation."

This unique mode of acquiring office is peculiarly Spanish, and claims a high antiquity. It may be traced back to some of the earliest kings of Spain. There is, however, more reason and honesty in it than at first would appear; for by such a mode of acquiring office they only did openly what ambitious and hypocritical office-seekers now effect secretly; while they are all the time declaiming against acquiring office with money as a thing most wicked and scandalous. By the Spanish system,

which at least had the merit of open competition and exemption from all bribery and hypocrisy, offices were doubtless as often filled by honest men as now. Offices continue to be purchased just as much now as ever; the only difference being, that what was formerly done openly and with the sanction of law, is now done secretly.

The Regidores, having thus acquired office, were also invested with those of Alférez Real, or Royal Standard Bearer, of Principal Provincial Alcalde, of Alguazil Mayor, or High Sheriff, of Depositary-General, and of Receiver of Fines.

The ordinary Alcalde and the Attorney-General Syndic were to be chosen, on the first day of every year, by the Cabildo, and were always re-eligible, during the two first years, by a unanimous vote, and subsequently by a bare majority. At such elections the votes were openly given and recorded.

The ordinary alcaldes were, individually, judges within the town of New-Orleans, in civil and criminal cases, in which the defendant did not possess and claim the privilege of being tried by a military or ecclesiastical tribunal, in virtue of the *fuero militar*, or *fuero eclesiastico*.* These alcaldes, in their chambers, and without any written proceedings, took cognizance of, and summarily decided upon, all judicial matters in which the value of the object in dispute did not exceed twenty dollars. In other cases, they sat in a hall destined for this purpose, and their proceedings were recorded by a notary and a clerk; and when the value of the object in dispute exceeded ninety thousand maravedis (\$330 88c.), an appeal lay from their decision to the Cabildo.

This body did not examine itself the judgment appealed from, but chose two Regidores, who, with the Alcalde who had rendered it, revised the proceedings; and, if he and either of the Regidores approved the decision, it was affirmed.

This Cabildo held its regular sessions on every Friday; but the Governor had the power of convening it at any time. In his absence, one of the Alcaldes presided, and, immediately after the adjournment, two Regidores went to his house and informed him of what had been done.

The ordinary Alcaldes had the first seats in the Cabildo, immediately after the Governor; and, below them, the other members sat in the following order: the Alférez Real, or Royal Standard Bearer, the Principal Provincial Alcalde, the Alguazil Mayor, or High Sheriff, the Depositary-General, the Receiver of Fines, the Attorney-General Syndic, and the Clerk.

The office of Alférez Real was merely honorary, no other function being assigned to the incumbent but the bearing of the royal standard in a few public ceremonies. The Principal Provincial Alcalde had cognizance of offences committed out of the town; the Alguazil Mayor executed personally, or by his deputies, all process from the different tribunals. The Depositary-General took charge of all moneys and effects placed in the custody of the law. The functions of the Receiver-General of Fines are pointed out by his official denomination. The Attorney-General Syndic was not, as may be supposed from his title, the prosecuting officer of the crown. His duty was to propose to the Cabildo such measures as the interest of the people required, and to defend their rights. This was a sort of imitation of the Roman tribune, and shows that, even in those days, and under that form of government which was reputed, not only absolute, but also tyrannic, the

* *Fuero* means privilege—for instance, such as the *fueros*, or privileges granted to particular provinces, to corporations, to the military, or to the ecclesiastical body, &c. &c.

people, contrary to the general belief, were admitted to have rights, which were to be advocated and defended. Such at least was the theory, if the practice was different.*

The Regidores received only a nominal salary of \$50 per annum, the fees of office supplying the balance.

From the Cabildo, the highest tribunal in the colony, there lay an appeal to the Captain-General of the Island of Cuba; from him, to the Royal Audience in St. Domingo, and thence to the Council of the Indies in Madrid.

The Governor of Louisiana was subordinate to the Captain-General residing in Cuba. He was invested with civil and military powers; and the higher officers about him were an

Intendant, who had the administration of the revenues, and of all that concerned the naval and commercial department; a Contador, or Royal Comptroller; an Auditor of War and Assessor of Government, who was the legal adviser of the Governor; an Auditor of the Intendancy, who was the legal adviser of the Intendant. There being in those days, in Louisiana, a scarcity of men learned in the law, says Judge Martin in his History, the Auditor of War frequently acted as the counsel, not only of the Governor, but also of the Intendant, of the Cabildo, and of all the other public functionaries. There was a secretary of the governor and a secretary of the intendant, a treasurer of the province, a general storekeeper and a purveyor, a surveyor-general, a harbor-master, an interpreter of the French and English languages, an Indian interpreter, and three notaries public; besides, a collector, a comptroller, a cashier, an inspector, and a special notary for the custom-house.†

The Governor exercised judicial powers in civil and criminal matters throughout the province; the Intendant in cases pertaining to the revenues, and to the navy; and the Vicar-General in the ecclesiastical department; and each of them had exclusive jurisdiction in their respective courts. The Governor could also make grants of lands.

In the parishes of Louisiana the government was administered by an officer of the army or militia, of no higher grade than a captain, stationed as civil and military commandant.

His duty was to attend to the police of the parish and preserve its peace. He was instructed to examine the passports of all travellers, and suffer no one to settle within his jurisdiction, without the license of the governor. He had jurisdiction over all civil cases in which the value of the object in dispute did not exceed twenty dollars; in more important cases, he received the petition and answer, took down the testimony, and transmitted the whole to the governor, by whom the record was sent to the proper tribunal. He had the power to punish slaves, and arrest and imprison free persons charged with offences, and was bound to transmit immediate information of the arrest, with a transcript of the evidence, to the governor, by whose order the accused was either discharged, or sent to New-Orleans. These parish commandants acted also as notaries public, and made inventories and sales of the estates of the deceased, and attended to the execution of

* *Spanish Domination* : Gayarre, chap. i. p. 5.

† Gayarre, chap. i. p. 6.

judgments, rendered in New-Orleans, against defendants who resided in the country parishes.*

O'Reilly, the first Spanish Governor of Louisiana, appears to have been a man of sterling integrity, enlarged and enlightened views, a high sense of honor and justice, and of a humanity worthy of a ruler possessed of extensive civil and military powers. He seemed anxious to promote the welfare and happiness of his people; and that they might be governed with good and wholesome laws, he ordered an abstract of the laws of Castile and of the Indies to be made, to serve as the statute law in all civil and criminal cases. "This abstract," as Mr. Gayarre justly observes, "will be found,† with the exception of a few objectionable provisions, to be remarkable for wisdom and humanity; and it would not require much investigation to discover worse legislation in these our days of enlightened morality and progressive knowledge."

Whatever may be thought of the machinery of government adopted by O'Reilly, his laws were certainly full of justice and humanity, and well calculated to secure to his subjects their rights. That our readers may have some idea of them, we will give a few extracts. Concerning the Cabildo, or Municipal Council, the 20th Art. of Sec. 1 reads as follows:

The electors, in the two jurisdictions, being responsible for the injury and detriment which the public may sustain, by the bad conduct and incapacity of the elected, in the administration of justice and the management of the public interests, should have for their only objects, in the election of ordinary alcaldes and other officers, the service of God, the king, and the public; and, in order to prevent an abuse of that great trust, their choice should be directed to those persons who shall appear to them most suitable for those offices, by the proofs they may possess of their affection for the king, their disinterestedness, and their zeal for the public welfare.

With the omission of the word *king*, (remarks Mr. Gayarre), this article would not be found inapplicable to present circumstances, and might be fitly recommended to that generation of electors who now hold in their hands the destinies of our country.

Again, Art. 21 :

The Cabildo is hereby informed that it must exact from the governors, previous to their taking possession of their office, a good and sufficient surety, and a full assurance to this effect—that they shall submit to the necessary inquiries and examinations during the time they may be in employment, and that they shall conform to whatever may be adjudged and determined against them. This article merits the most serious attention of the Cabildo, which is responsible for the consequences that may result from any omission and neglect in exacting the aforesaid securities from the governors.

Considering the age in which it was framed, (observes Mr. Gayarre), and the source from which it emanated, this article deserves to be noticed, on

* Martin's History of Louisiana.

† Mr. Gayarre gives it in full, in an Appendix.

account of the check which it intends to impose on the exercise of the executive power.

The laws regarding prisoners were exceedingly humane. Art. 13 reads as follows:

The ordinary Alcaldes, accompanied by the Alguazil Mayor (High Sheriff), and the escribano (clerk), shall, every Friday, proceed to the visitation of the prisons. They shall examine the prisoners, the causes of their detention, and ascertain how long they may have been imprisoned. They shall release the poor who may be detained for their expenses, or for small debts; and the jailer shall not exact from them any release fee. The Alcaldes shall not set at liberty any of the prisoners detained by order of the Governor, or of any other judge, without the express consent of said authorities.

Laws are generally an index to the character of the times and the state of public morals. The following, from the 5th Article of O'Reilly's abstract, shows that a state of things existed in Louisiana, in his time, not unlike that found at the present day in Spain, Mexico, and some other Spanish countries:

The 5th Article says:—The principal object of the institution of the tribunal of the Santa Hermandad (Holy Brotherhood) being to repress disorders, and to prevent the robberies and assassinations committed in unfrequented places by vagabonds and delinquents, who conceal themselves in the woods, from which they sally to attack travellers and the neighboring inhabitants, the Alcalde Mayor Provincial shall assemble a sufficient number of members or brothers of the Santa Hermandad, to clear his jurisdiction of the perpetrators of such evil deeds, by pursuing them with spirit, seizing or putting them to death.

The Procurador-General of O'Reilly's government was an officer to whom we have no exact parallel in this country. Regarding the Procurador-General, Sec. 7th of Art. 1 reads as follows:

The Procurador-General is an officer appointed to assist the people in all their concerns, to defend them, preserve their rights, and obtain justice on their behalf, and to enforce all other claims which relate to the public interest.

In consequence thereof, the Procurador-General, who is appointed solely for the public good, shall see that the municipal ordinances are strictly observed, and shall endeavor to prevent everything by which the said public interest might suffer.

For these purposes, he shall apply to the tribunals competent thereto, for the recovery of debts and revenues due to the treasury of the town of New-Orleans, in the capacity of attorney for said town. He shall pursue these causes with the activity and diligence necessary to discharge him from the responsibility he would incur by the slightest omission.

He shall see that the other officers of the Council or Cabildo discharge strictly the duties of their offices; that the Depositary-General, the Receiver of Fines, and all those who are to give sureties, shall give such as are good and sufficient; and in case said sureties should cease to be good, he shall demand that they be renewed conformably to law.

He shall be present at, and shall interpose in the division of lands, and in other public matters, to the end that nothing unsuitable or injurious shall occur.

It must be admitted, says Mr. Gyarre, that this whole section is replete with a feeling of liberality and a regard for the interests of the people, which is supposed to appertain only to a republican government.

Imprisonment for debt, which still exists in the most enlightened countries, and even in one, at least, of our own States—Massachusetts—was considered an abomination by the Spaniards of Louisiana, under O'Reilly's administration, and allowed to take place in only one solitary case—that in which the debtor was known to be perfectly solvent and able to pay his debts. It is a disgrace to our country that even one of our States should still retain a law so barbarous.

The Spanish laws of Louisiana regarding criminal trials were somewhat remarkable. Art. 14 read as follows :

"The accused, being convicted of the crime, on its being fully established on trial by sufficient proof, or by some other proof in conjunction with his own confession, may be condemned to the penalty provided by law for the same. The said condemnation shall also take place, when two witnesses of lawful age and irreproachable character shall depose that, of their certain knowledge, the accused has committed the crime; but when there shall appear against the accused but one witness, and other indications or conjectures, he shall not be condemned to the penalty provided by law; but some other punishment shall be inflicted as directed by the judge, with due consideration of the circumstances which may appear on the trial. This state of things requires the greatest circumspection, as it must always be remembered, that it is better to let a criminal escape than to punish the innocent."

This provision, remarks Mr. Gyarre, concerning condemnation on the testimony of one witness, whatever may be said as to the propriety of its policy, is certainly more humane than the law by which we are now governed, and which may send a man to the scaffold on the bare testimony of another. It will also be observed that the well-known axiom that "it is better that guilt should go unpunished, than that innocence should suffer unjust punishment," is not confined to the common law of England. It may, moreover, not be amiss here to remark, in a parenthesis, that the boasted privileges of English liberty existed in some parts of Spain, although destroyed since, long before they were dreamed of in that noble land from which we have borrowed so much of our judicial and political organization.

The laws of O'Reilly's government, however, were not, as might be expected in that age, entirely free from barbarism and puritanical severity; though they were not more so than the laws of New-England, which punished with great severity the most trifling offences, and pursued with imprisonment, banishment, and death, innocent persons for their religious belief. A few passages will sufficiently show the character of some of the punishments:

"He who shall revile Our Saviour, or his mother the Holy Virgin Mary, shall have his tongue cut out, and his property shall be confiscated, applicable one-half to the public treasury, and the other half to the informer."

Art. 2d said: "He who, forgetting the respect and loyalty which every subject owes to his king, shall have the insolence to vilify his royal person, or that of the queen, of the hereditary prince, or of the *infantes* (princes of the blood), or of their sons, shall be punished corporally, according to the circumstances of the crime; and the half of his property shall be confiscated to the profit of the public or the royal treasury, if he have legitimate children; but should he have none, he shall forfeit the whole, applicable two-thirds to the public treasury, and the other third to the accuser."

The 4th Art. contains a remarkable feature. A plebeian, using opprobrious language to the detriment of any one, was condemned to pay a fine of 1200 maravedis; but should a nobleman have committed the same offence, the penalty for him was 2000 maravedis. This distinction seems to have originated from the impression, that such an offence ought to be more severely punished in one of gentle than of base blood, on account of its being more heinous in one who, on account of his rank, ought to have been more correct in his deportment.

Art. 6 said: "The married woman convicted of adultery, and he who has committed the same with her, shall be delivered up to the husband, to be dealt with as he may please; with the reserve, however, that he shall not put one of them to death, without inflicting the same punishment on the other."

Art. 7. "The man who shall consent that his wife live in concubinage with another, or who shall have induced her to commit adultery, shall, for the first time, be exposed to public shame, and condemned to a confinement of ten years in some fortress; and, for the second time, shall be sentenced to one hundred lashes and confinement for life."

These, and a great many others that we might quote, are thoroughly characteristic of the age. Those which we have omitted are too revolting to be cited, and show the depravity of the times.

O'Reilly's instructions to the *Commandantes* of the several parishes of Louisiana exhibit statesmanship of a high order, and an honorable line of policy. He enjoined upon them a strict observance of all existing treaties with the English, kind treatment of the Indians, and the greatest vigilance in respect to the observance of the laws.

Among his first decrees—and O'Reilly was clothed with unlimited authority—was the suppression of all trade with Mexico, and with the English navigating the Mississippi. He also suppressed the enslaving of the Indians. In his instructions to the *Commandantes* he says:

"It shall be made known to all the inhabitants that, by the laws of his Majesty, which shall go into operation in this province on the 1st of December, 1769, it is not permitted that Indians be held in slavery; wherefore, from the date of the notification of these presents, no one shall buy, exchange, and barter, or appropriate to himself, Indian slaves. They shall neither sell, nor in any way part with, those they now have (unless it be to set them free), until they hear further from his Majesty on this subject. The *Commandantes* shall make out an exact list of the Indian slaves who are within their jurisdiction. Said list shall contain the names of the owners, the price which they ask for every one of their Indian slaves, and

the exact filiation of said slaves. This will obviate any future abuse on a subject which has so strongly excited the solicitude of our laws."

We cannot dwell longer on the early Spanish government of Louisiana, organized by O'Reilly and sanctioned by the crown of Spain. Louisiana was, in fact, a Dependency of Cuba, and was governed by the same laws as those which prevailed in the other American possessions of the King of Spain. The acts of O'Reilly abolished completely all previous French laws governing the colony.* The French language was tolerated in all legal proceedings, but all the acts, decrees, and public documents were required to be in the Spanish language.

On the arrival of O'Reilly in Louisiana, he found the colonists trading extensively with Mexico and with the English, while they were not allowed to trade with Cuba. This trade he immediately suppressed. In his first dispatch to the King of Spain he says:

"I found the English in complete possession of the commerce of the colony. They had in this town their merchants and traders with open stores and shops, and I can safely assert that they pocketed nine-tenths of the money spent here. The commerce of France used to receive the productions of the colony in payment of the articles imported into it from the mother country; but the English, selling their goods much cheaper, had the gathering of all the money. I drove off all the English traders and the other individuals of that nation whom I found in this town, and I shall admit here none of their vessels."

His principal objection to the English appears to have been that they drained the Colony of its money.

The administration of O'Reilly has been very unjustly, as we think, characterized as tyrannical and even cruel. The developments of Mr. Gayerre, in the work now under review, will serve to place O'Reilly in a better light. We will close our notice of his administration with the following tribute paid to him by our author:

The motto on O'Reilly's coat of arms was, "*Fortitudine et prudentiâ*," and he seems not to have been deficient in the possession of both these virtues. But there is hardly an instance, when blood shed in a political cause, whatever may have been the just and apparent necessity of it at the time, did not, sooner or later, rise from the earth, to cloud in the eye of the world the fame of the author or adviser of the deed. This has become an historical truth, and is confirmed by what O'Reilly's memory has suffered, in consequence of the execution of Lafrénière and his companions. He was not, however, the blood-thirsty tyrant that he was represented to be, and never, except on this occasion, in the whole course of a long public life, which was exposed to the scrutiny of those who hated him as a foreigner, and envied him as one of the king's favorites, did he ever give the slightest cause to accuse him of not having been always attentive to the dictates of humanity. His talents as a military man, and as an administrator when dis-

* Gayerre.

charging the functions of a civil officer, cannot be the object of a doubt, and it must even be admitted that they were of a superior order.

When in Louisiana, he was no more than thirty-four or thirty-five years old. There he left a reputation of strict morality and military precision. Fond of pomp, and somewhat ostentatious in all his tastes, naturally gay, and animated with strong sociable dispositions, he, nevertheless, was not addicted to pleasure, and he devoted himself entirely to the business he had on hand. He was exceedingly prompt, exact and active, and he required the same qualifications in his subordinates. By a proper and systematic distribution of his time, to which he inflexibly adhered, he could get on, with astonishing ease and rapidity, through an immense deal of labor, and he left nothing to be done by others which he could do himself. He emphatically was a man of action, a lover of the camp, as his predecessor, Ulloa, was a man of study, a lover of meditation and scientific speculations. It was said that he endeavored, as far as possible, to see everything with his own eyes, and, when he had to trust others, he never failed to descend into the minutest details of the duties which he expected them to fulfil. Not only was O'Reilly excessively urbane in his social and official intercourse, but distinguished also for the exquisite refinement of those courtly manners which have now almost ceased to be a reality, and the recollection of which will soon fade away into vague and dreamy traditions. But he was of an irritable temper, and liable to fits of haughtiness on the slightest appearance of what he supposed to be premeditated contradiction or opposition. Preserving all the vivacity, excitability, and sprightly wit of the Irish temperament, he was remarkably animated in conversation, and seemed to have a relish and a turn of mind for a good joke. He cultivated with sedulous attention the society of some families with which he seemed to be highly pleased, and which he always treated with deferential courtesy. Escorted by a few dragoons, his carriage was frequently seen driving at a rapid pace up the coast, where he used, in his moments of leisure, to visit a family residing a few miles from the town, and in which he found himself in an atmosphere reminding him of that of the best European society. One day, when, according to his habit, he had provoked a keen encounter of wits with the lady of the manor, being stung by a sharp repartee, his hasty temper betrayed him, and he forgot himself so far as to say, with a tone of command: "Madam, do you forget who I am?" "No, sir," answered the lady, with a low bow, "but I have associated with those who were higher than you are, and who took care never to forget what was due to others; hence, they never found it necessary to put any one in mind of what they were." Nettled at this proud answer, Count O'Reilly departed instantly, but returned the next day with a good-humored smile, and an apology besitting a gentleman of his rank. Finally, he became a much valued friend, where at first he had merely been a guest, and, to complete the description of his character, it may be sufficient to add that, whatever may have been some of his errors, he won esteem and affection wherever he was intimately known.

Don Luis de Unzaga, the successor of O'Reilly, was the Colonel of the regiment of Havana. He was appointed by O'Reilly, which appointment received the royal sanction on the 17th of August, 1772. He found the commerce of the colony in a sinking condition. The suggestions of O'Reilly that the colony be allowed to trade freely with Spain and Cuba, had not been heeded. Cuba was completely closed against them, and they were allowed to trade only with the ports of Seville, Alicanti,

Carthagena, Malaga, Barcelona and Coruña, and only in Spanish vessels.

"Even these vessels, when sailing to or from Louisiana, were prohibited from entering any Spanish port in America, except in case of distress, and then they had to be submitted to a strict examination and to heavy charges. It is true that, in 1768, an exemption from duty had been granted by the king to the commerce of Louisiana on foreign and Spanish goods, either when exported from the six ports already mentioned, or when imported into New-Orleans; but the exportation of specie or produce from Louisiana was burdened with a duty of four per cent. The colonists had lately obtained a very slight and insufficient mitigation of the evils of which they complained, and it consisted in a permission granted for the admission of two vessels from France annually."

This cramped condition of the trade of the colony was perfectly in accordance with the short-sighted policy of Spain, and who has not yet learned to do any better. As a natural consequence of such a state of things, the deficiencies of the trade of the colony were, to a considerable extent, supplied by contraband.

"The English," says Mr. Gayarre, "had engrossed the contraband trade of the colony through the facilities afforded them by the privilege of navigating the Mississippi. Their vessels were constantly ploughing the river up and down; and, under the pretence of going to their possessions of Manchac, Baton Rouge and Natchez, the English contrived clandestinely to supply the inhabitants of New-Orleans and the planters above and below that town with goods and slaves. They took in exchange whatever their customers had to spare,* and extended to them a most liberal credit, which the good faith of the purchasers amply justified. Besides, they had very large warehouses at Manchac, Baton Rouge, and Natchez, and a number of vessels constantly moored a short distance above New-Orleans, opposite to the spot now known as the city of Lafayette. To these places the inhabitants of Louisiana used to resort, and to carry on their contraband dealings, which were hardly, if in any way, checked by the Spanish authorities. Encouraged by this tacit connivance, the English had gone farther, and had contrived to convert into floating warehouses two vessels, the cabins of which they fitted-up as stores, with shelves and counters. These ingeniously devised shops were kept moving up and down the river, stopping, like our present line of coast steamboats, at every man's door, and tempting him and his family with the display of their goods and trinkets. Thus, in this indirect way, the English having monopolized the trade of Louisiana, this colony had, in a commercial point of view, become for its owner an entirely worthless possession.

"Without this infraction of the unwise provisions of the commercial and revenue laws of Spain, it is difficult to imagine how the colony could have subsisted, and, therefore, Unzaga acted judiciously for the province and for Spain, when he disregarded the Chinese-like regulations which he was commanded to enforce, and when he winked at their violation. The poor merchants of New-Orleans, whose occupation, like Othello's, was gone, were permitted to indulge in impotent clamors, and in slyly whispered insinuations that the Spanish governor had some reason of his own, besides the alleged one of supplying the wants of the colony, for the indulgence which he extended to British traders. But their complaints were as un-

* Martin's Louisiana, vol. ii. p. 26.

noticed as the idle wind, and things went on as usual, without even any show of attempted interruption."*

On the breaking out of the war between the American colonies and Great Britain, Spain became exceedingly alarmed for the safety of Louisiana. Unzaga was directed to communicate to his government the defensive force of the colony, and all that he knew regarding the designs of the English. In his communication to the government of Spain on the subject, he proposes to abandon the colony and retire into Mexico, should the English make a descent upon him. His ideas regarding the results of the American war were curious. In his dispatch to Spain he says:

"I shall not allow myself to be thrown off my guard, and cease to use those precautions which I ought to resort to in the present circumstances, because I suspect that, at any moment, the royalists and the insurgents may make up their quarrel and unite their forces, in order to take possession by surprise of one of the domains of some European power, and thus to indemnify themselves for their losses and expenses, or in order to carry into execution any other designs, which I shall endeavor to penetrate by using all the means at my disposal; and, to that effect, I have dispatched a trusty man to Philadelphia, who, under the pretext of looking for flour, with a passport, and with permission to transport the flour to Cadiz in a Spanish vessel and with a Spanish crew, will endeavor to discover their designs by stopping at some of their ports."

Soon after this, Unzaga, at his own request, was replaced by Galvez as Governor of Louisiana; who, like his predecessor, watched with intense interest the struggle which was going on between England and her American colonies; and he received from Spain orders to afford secret assistance to the insurgents. As everything relating to the events of the Revolutionary war in the South are interesting, we shall devote the remainder of this article to such details as we find given by Mr. Gayarre on the subject.

"In consequence," says Mr. Gayarre, "of the favorable dispositions of Spain, which were conveyed to some of the leaders of the Americans in the West, several large boats had come this year, 1777, from Fort Pitt to New-Orleans, where munitions had been collected by Oliver Pollock, with the occult aid of Galvez, for the use of the thirteen United States. 'Captain Willing, of Philadelphia, who came in one of those boats,' says Judge Martin, in his History of Louisiana, 'visited the British settlements on the Mississippi, and some of his companions crossed the lakes to Mobile, with the view to induce the inhabitants to raise the striped banner, and join their countrymen in the struggle for freedom. The people of both the Floridas, however, remained steadfast in their attachment to the royal cause.'"

Col. Geo. Morgan, the commander of Fort Pitt, carried on an active correspondence with Galvez, and gave him a lucid ac-

* Gayarre, p. 46.

count of all the events that had occurred since the beginning of the Revolution, hoping to enlist the feelings of the Spanish Governor in favor of the Americans, and to obtain his aid. In a letter, which Col. Morgan wrote to Galvez, dated April 22, 1777, he says :—

“Should we be able to procure transports in New-Orleans, I think that we could easily surprise Mobile and Pensacola, destroy their fortifications, and possess ourselves of all their munitions, unless these ports be better fortified and defended than we imagine. I would pay liberally to have a plan of the fortifications, and correct information as to the garrisons and naval forces which protect these places. If one thousand men were sufficient for the contemplated expedition, and if we could, in New-Orleans, purchase or charter vessels, and procure artillery, on as short notice as possible, we could strike the most successful blow in a quarter where it is least expected. But we shall never proceed to any action on the subject, before having previously obtained the permission and co-operation of your Excellency, and before having secured all the transports, provisions, &c., of which we may stand in need. If we cannot, however, expect so much at your hands, we flatter ourselves that you will at least permit us to trade freely with New-Orleans, and I beg your Excellency to inform me by an express messenger of your decision, and this, of course, at my expense.”

Galvez, however, received these overtures of Col. Morgan with great caution. He did not like the idea of permitting the Americans to set their foot in military array on the soil of Louisiana, fearing, perhaps, that when once there, they might turn their arms against himself. He therefore eluded giving a positive answer to Col. Morgan, and prepared himself for preventing the passage of any of the belligerents through his territories.

In Jan., 1778, Capt. Willing went to New-Orleans, to enter into communication and concert with Oliver Pollock, who, with the permission and support of Galvez, had now openly assumed the character of an agent for the insurgents. The Court of Spain had gradually become less timid in its manifestation of hostility towards Great Britain; and Galvez, encouraged by his government, had gone so far as to give assistance to the Americans in arms, ammunition, provisions, &c., to the amount of seventy thousand dollars. By these means the posts occupied by the militia of Virginia on the Mississippi had been strengthened, and the frontier inhabitants of Pennsylvania had received material aid and comfort. Under such encouraging circumstances, Willing had not hesitated to increase in New-Orleans the crew of his boats; and with most of those same companions who had come down with him, and who were about fifty in number, he engaged in foraging and predatory excursions against the British planters on the Mississippi. This troop captured a small vessel, which was at anchor near the mouth of Bayou Manchac, and took possession of the fort, which was evacuated by its garrison of about fifty or sixty men, who crossed the Mississippi, and sought refuge on the Spanish side. In the very vessel of which they had possessed themselves the Americans proceeded up the river to Baton Rouge, stopping at the several plantations on the way, burning all the houses and other buildings, and carrying off the negroes.*

* Gayerre, p. 113.

The British planters fled in great consternation, and put themselves under the protection of Galvez, (Spain being then at peace with England,) little suspecting the part he was acting. The invaders, under Willing, continued their course of devastation up the river, as far as Natchez, laying waste the plantations, destroying the stock, applying the torch of the incendiary to the edifices, and carrying off such slaves as had not followed their masters in their flight. All the sympathies of the people of Louisiana were in favor of the Americans; "but," says Judge Martin, in his History, "this cruel, wanton, and unprovoked conduct towards a helpless community, was viewed with great indignation and horror—much increased by the circumstance of Willing's having been hospitably received and entertained, the preceding year, in several houses which he now committed to the flames." It must also be added, says Mr. Gayarre, that most of the sufferers by these acts of Vandalism were well known in New-Orleans, where they used to resort to supply their wants, or for social intercourse; and that all of them had more or less extensive relations with the Spanish portion of Louisiana, in whose families some of them had married. This contributed to draw from those inhabitants a keener reprobation of the conduct of Captain Willing, who was looked upon as having acted more like an Indian warrior than a civilized enemy. The Americans, however, did not choose to attempt retaining possession of these posts, or of any portion of the territory thus devastated.

Galvez was not long compelled to operate secretly against the English; from the recognition of the independence of the American Colonies by France, which involved her in the war with England, Spain offered herself as a mediator between those two powers. England rejected the mediation, and Spain then united with France, by publishing a formal declaration of war against Great Britain, on the 8th of May, 1779.

Galvez immediately planned an attack on the English, and proceeded, with Oliver Pollock, the agent of the American Congress, up the Mississippi with a force of about 1,300 whites, and 160 Indians. Fort Manchac, 115 miles above New-Orleans, was taken without opposition. They next advanced to Baton Rouge, the fort of which was attacked with so much success that the English surrendered in a few hours, giving also into the hands of Galvez Fort Panmure, at Natchez.

On Lake Pontchartrain, an English privateer was taken, and the Spanish gun-boats captured at Galveston three schooners and a small brig, which were returning to Pensacola; also on the Mississippi two cutters, loaded with provisions for the English.

A curious adventure on Lake Pontchartrain is thus related by Mr. Gayarre:—

"One Vincent Rieux, a native of New-Orleans, had been put in command of a sloop of war, to cruise in the lakes. On his coming to Bayou Manchac, through which the English used to receive all their supplies from Pensacola, having been informed that one of their barques, well armed, and well laden with provisions and ammunition, was soon expected, he landed his guns, cut down a few trees to form a sort of intrenchment, and kept himself concealed with his crew. When he saw the English close

under the muzzles of his guns, he suddenly blazed away at them, and raised, with his companions, such shouts and yells, that the enemy, persuaded that they had to deal with at least five hundred men, fled below deck. Rieux, availing himself of their panic, rushed on board, closed the hatches, and captured every soul that was in the vessel. The prisoners were—one captain, one first lieutenant, two second lieutenants, fifty-four grenadiers of the Waldeck regiment, and from ten to twelve sailors. It would be difficult to describe their surprise, when they found themselves the captives of fourteen men; these were, every one of them, Creoles or natives of Louisiana.*

The American Congress, on the rupture between England and Spain, regarded it as a favorable occasion for sending to the court of Madrid a Minister, whose instructions were to negotiate a treaty of alliance, and, particularly, to insist on their right to the navigation of the Mississippi to the sea. This right, however, the King of Spain was not willing to admit, and was supported by France in the view which he took of the question. "We are disposed," said, in substance, the ministers of the Catholic King to the United States, "to acknowledge your independence, and to enter into a treaty of alliance and commerce with you; but, if you wish us to consent to your admission into the great family of nations, you must subscribe to the right of Spain to the exclusive navigation of the Mississippi, and consent to our taking possession of both the Floridas, and of all the territory extending from the left bank of that river to the back settlements of the former British provinces, according to the proclamation of 1763. No part of this territory ever was included within your limits, and the whole of it, with the Floridas, may be legitimately conquered by his Catholic Majesty, without giving you any ground for remonstrance or complaint. We furthermore expect you to prohibit the inhabitants of your confederacy from making any attempt towards settling in or conquering any portion of the British territory to which we refer. Considering that you have, beyond the mountains, no possessions except the post of Kaskaskia, and a few others, which you have momentarily acquired from the British, and which you hold only by a very precarious tenure, what is the navigation of the Mississippi to you in comparison with the importance of your recognition by us as an independent nation, and of the advantages which you will derive from your relations with us, in consequence of a treaty of alliance and commerce?"†

This haughty reply of Spain was received with silent contempt.

The next expedition of Galvez was against Mobile, which he took with ease—Gen. Campbell, the English commander, sent from Pensacola, arriving too late to defend it. Pensacola was his next object of attack. The siege of Pensacola is related by Mr. Gayarre in all its details. The unfortunate explosion of a powder magazine opened the way for the Spaniards into it, after an obstinate and protracted resistance on the part of the English. Eight hundred of the English were taken prisoners, and Florida was surrendered to Spain.

The fall of Pensacola terminated the war in the South; it having been followed, soon after, by the Treaty of Paris, signed on the 3d of Sept., 1783, by which Great Britain acknowledged the independence of the United States.

* Gayarre, p. 131.

† *Ib.*, p. 134.

The treaty of 1783 was not received in the South with as much favor as was to have been expected, and a proposition was made by the discontented to establish in the South and West a *new Government*, independent of the American Congress. This remarkable scheme, of which little was, at the time, known, was first divulged by *McGillivray*, one of the most influential chiefs of the Talapouches, in a letter which he wrote, says Mr. Gayarre,* to the Spanish Governor of Pensacola, to propose a treaty of alliance and commerce with the Spaniards. He consequently represented in glowing colors the advantages which Spain would derive from it, and, what is curious, he hints at a scheme, which was subsequently adopted by the court of Madrid, and which was, to separate the Western territories from the rest of the United States.

"Having been informed a few days ago," said he, "by a letter received from St. Augustine, that the definitive treaty of peace between their Catholic and Britannic Majesties was ratified in Paris, on the 3d of September last, I take the liberty to congratulate with you on this fortunate event. As this treaty confirms Spain in the possession of both the Floridas, I solicit, in the name of the Talapouche nation, the beneficent protection of his Catholic Majesty for our persons, and for the land which we claim, and of which we are in actual possession. If the fortune of war has compelled his Britannic Majesty to withdraw from us his protection, nevertheless he had no right to transfer us away, with our property, to any power whatever against our will and inclination.

"Certainly, as a free people, we have a right to choose our protector and we do not see any one who answers our purposes better than the sovereigns of the two Floridas. I will, therefore, lay before you a few reasons, to demonstrate that it would be sound policy on the part of Spain to grant us what we desire.

"Since the publication of the general treaty of peace, the American Congress has brought to light a situation of its affairs, showing the debts and revenues of the Confederacy. By this statement it appears, that the debts contracted in Europe and America are estimated at more than forty-two millions of dollars, the interest of which is about two millions and a half. The court of Versailles has urged upon the American Congress the necessity of paying the interest of the money due to France. In order to raise the necessary funds to meet these claims, the Congress has imposed duties, taxes, and contributions, striking alike the thirteen United States. This expedient has produced so unfavorable an impression, that a good many of their citizens, in order to escape from the burden of taxation, have abandoned their dwellings for the woods,† and have marched towards the Mississippi, in order to unite with a certain number of disbanded soldiers, who are anxious to possess themselves of a considerable portion of the territory watered by this river, and they propose establishing what they call the *Western Independence*, and throwing aside the authority of the American Congress. The emigrants are so numerous that, in a short time, it is possible that they may find themselves strong enough to carry into execution their scheme of separation; and, if they once form settlements on the Mississippi, it will require much time, trouble, and expense to dislodge them.

"I can assure you that the Americans in the South employ every means in their power to enlist the feelings of the Talapouches on their behalf, and to secure the support of this nation. Should they succeed, the result of their influence will be, that the Indians, instead of remaining the friends of Spain,

* Gayarre, pp. 158, 9.

† Buscando nueva morada en los bosques, dirigiendo principalmente su viaje al Mississippi para unirse con porcion de vagos soldados que desean poseer gran parte de las tierras de este rio, y piensan establecer lo que ellos llaman, la independencia occidental, fuera de la autoridad del Congreso.

will become very dangerous neighbors, and will assist the Americans in all the designs which they may form against Pensacola, Mobile, or any part of the adjacent Spanish dominions; and of all these things the Americans speak openly. I will now communicate my views as to the best course to be pursued to frustrate their designs." The course which he advocated was, in substance, to grant to the Talapouches as many commercial and other privileges as could be bestowed upon them, as the price of their non-participation in the ambitious schemes of the founders of the new empire then in embryo. The Spaniards undoubtedly received in full faith the statements of the Indians regarding the new scheme of the Americans; for in an Indian Congress, held at Pensacola and Mobile, soon afterwards, in 1784, they granted the Indians all that they required, and dismissed them with liberal distributions of brandy, powder, etc.

We hear nothing more of this grand scheme of a new empire in the West and South, until the year 1787, when the Kentuckians, and others west of the Apalachians, had become exceedingly discontented.

"They had repeatedly laid their grievances and wrongs," says Mr. Gayarré, "before the general government, and obtained no redress. They had in vain petitioned Congress to secure for them the free use of the Mississippi, without which it was useless for them to till the ground, since they had no market for their produce. The growing population of that newly settled region became intensely excited, and the bold and sturdy yeomen of the West determined to take their case into their own hands. But if they were unanimous as to that, they were divided as to the means of accomplishing their object, and they had even split into five different parties.

"The first (Judge Martin's History, vol. ii., p. 101) was for being independent of the United States, and for the formation of a new republic, unconnected with the old one, and resting on a basis of its own, and a close alliance with Spain.

"Another party was willing that the country should become a part of the province of Louisiana, and submit to the admission of the laws of Spain.

"A third desired a war with Spain and the seizure of New-Orleans.

"A fourth plan was to prevail on Congress, by a show of preparation for war, to extort from the Cabinet of Madrid what it persisted in refusing.

"The last, as unnatural as the second, was to solicit France to procure a retrocession of Louisiana, and to extend her protection to Kentucky."

Miró, who was then Governor of Louisiana, and Gardoqui, the Spanish Minister residing near our government, at Philadelphia, watched all of these movements with the greatest satisfaction, and both pursued the same object—that of drawing into Louisiana

"as much of the western population as could be induced to emigrate, and even to operate, if possible, a dismemberment of the confederacy, by the secession of Kentucky and of the other discontented districts from the rest of the United States. Both these Spanish functionaries were partners in the same game, and yet they were unwilling to communicate to each other the cards they had in hand. Each one was bent upon his own plan, and taking care to conceal it from the other; each one had his own secret agents unknown to the colleague whom he ought to have called to his assistance. There was a want of concert, arising perhaps from jealousy, from the lack of confidence, from ambition, from the desire of engrossing

all the praise and reward in case of success, or from some other cause. Be it what it may, the consequence was, that the schemes of these two men frequently counteracted each other, and resulted in a series of measures which were at variance and contradictory, and which seemed inexplicable to him who had not the key to what was going on behind the curtain.

"Among the most influential and popular men in the west, through whose co-operation Miró hoped to accomplish his object, was General James Wilkinson, who had already acquired considerable reputation in the military service of the United States, and who had lately emigrated to that section of the country. This individual had some friends among the merchants of New-Orleans, with whom he corresponded, and on whose influence with the Spanish Colonial government, backed by his own talents, address and management, he confidently relied in his hope to be able to open a lucrative trade between that town and the western country, which trade would be exclusively conducted by or through himself, and would thus secure to him a rapid and large fortune. General Wilkinson had therefore descended to New-Orleans, in the garb of a merchant and speculator, with a cargo of tobacco, flour, butter and bacon. Orders had been issued to seize and confiscate the boat and its load, when Wilkinson, having had an interview with Governor Miró, was permitted to sell his cargo without paying any duty. Several other interviews followed, and Wilkinson was hospitably feasted by the Spanish Governor, who became every day more friendly and condescending, and who granted to his guest permission to introduce into Louisiana, free of duty, many western articles of trade which were adapted to its market. Wilkinson remained in New-Orleans during the months of June, July, and August, and sailed in September for Philadelphia. Many wondered at the intimacy which had grown up, during this time, between Miró and Wilkinson, and sly hints and insinuations were thrown out as to its nature and tendency."*

Wilkinson, while in New-Orleans, at the request of Miró, committed to writing the details of the whole scheme of separation from the United States.

Fear of the United States was the sole motive that actuated the Spaniards; and they therefore encouraged emigration to Louisiana, with the expectation that the emigrants would constitute a reliable and increasing means of defence in case of invasion. Lands were to be given them, and the enjoyment of their religion. In his instructions to the Governor of Natchez, Miró says:—

"I herewith forward to you a copy of the oath which you will require of them. You will take notice of its last clause, by which they bind themselves to take up arms against those who may come as enemies from the settlements above; you will then, after having assured them that they shall not be troubled in matters of religion, inform them that the object of peopling Louisiana is to protect it against any invasion whatever which may be directed against it from the aforesaid settlements; that this is to their own interest, since, under the Spanish domination, they cannot fail to be happy, on account of its mild and impartial administration of justice, and because they will have no taxes to pay; and besides, that the royal treasury will purchase all the tobacco which they may raise. Whilst presenting to them these considerations, you will carefully observe the manner in

* Gayarre, p. 194, 5.

which they shall receive them, and the expression of their faces. Of this you will give me precise information, every time that you send me the original oaths taken.

"The form of the oath was as follows: 'We, the undersigned, do swear on the Holy Evangelists, entire fealty, vassalage and lealty to his Catholic Majesty, wishing voluntarily to live under his laws, promising not to act, either directly or indirectly, against his real interest, and to give immediate information to our commandants of all that may come to our knowledge, of whatever nature it may be, if prejudicial to the welfare of Spain in general, and to that of this province in particular, in the defence of which we hold ourselves ready to take up arms on the first summons of our chiefs, and particularly in the defence of this district, against whatever forces may come from the upper part of the river Mississippi, or from the interior of the continent.'"^{*}

Wilkinson kept up a regular correspondence with Miró in *cipher*, much of which is given by Mr. Gayarre. In one of his letters to Miró, in 1788, after stating that Kentucky would cease to be subject to the jurisdiction of Virginia on the 1st of January, 1789, and that a Convention had been already called to frame a State Constitution, he adds:—

"The Convention of which I have spoken will meet in July. I will, in the mean time, inquire into the prevailing opinions, and shall be able to ascertain the extent of the influence of the members elected. When this is done, after having previously come to an understanding with two or three individuals capable of assisting me, I shall disclose so much of our great scheme as may appear opportune, according to circumstances, and I have no doubt but that it will meet with a favorable reception; because, although I have been communicative with no more than two individuals, I have sounded many, and wherever it has seemed expedient to me to make known your answer to my memorial, it has caused the keenest satisfaction. Colonel Alexander Leatt Bullit and Harry Innis, our attorney-general, are the only individuals to whom I have intrusted our views, and, in case of any mishap befalling me before their accomplishment, you may, in perfect security, address yourselves to these gentlemen, whose political designs agree entirely with yours. Thus, as soon as the new government shall be organized and adopted by the people, they will proceed to elect a governor, the members of the legislative body and other officers, and I doubt not but that they will name a political agent with power to treat of the affair in which we are engaged, and I think that all this will be done by the month of March next. In the mean time, I hope to receive your orders, which I will do my utmost to execute.

"I do not anticipate any obstacle from Congress, because, under the present federal compact, that body can neither dispose of men nor money, and the new government, should it establish itself, will have to encounter difficulties which will keep it weak for three or four years, before the expiration of which I have good grounds to hope that we shall have completed our negotiations, and shall have become too strong to be subjected by any force which may be sent against us. The only fears I have proceed from the policy which may prevail in your Court. I am afraid of a change in the present ministry, and in the administration of Louisiana, of the possibility of which event you are better judges than I can be, and I beg you to be explicit with me on the subject."[†]

^{*} Gayarre, p. 202.

[†] Gayarre, pp. 209, 10.

Copies of all these letters were sent to Spain, and money was loaned to Wilkinson by the Spanish Intendant, Novarro, at New-Orleans, to enable him to mature his plans.

On the 12th of February, 1789, Wilkinson wrote from Lexington, Kentucky, to Governor Miró: "Immediately after having sent you my despatch by Major Dunn, I devoted all my faculties to our political designs, and I have never since turned aside from the pursuit of the important object we have in view.

"The question of separation from the United States, although discussed with vehemence among the most distinguished inhabitants of this section of the country, had never been mentioned, in a formal manner, to the people at large, but now was the time for making this important and interesting experiment, and it became my indispensable mission to do so. I had to work on a ground not yet prepared for the seed to be deposited in it, and I felt that, to produce a favorable impression, I had to proceed with reserve, and avoid with the utmost care any demonstration which might be calculated to cause surprise or alarm. For these motives, I gave an equivocal shape to the expression of my design, speaking of it in general terms, as being recommended by eminent politicians of the Atlantic coast, with whom I had conversed on this affair, and thus, by indirect suggestions and arguments, I inspired the people with my own views, without presenting them as such, because it would have been imprudent in me to divulge them under the existing circumstances, and I can give you the solemn assurance that I found all the men belonging to the first class of society in the district, with the exception of Colonel Marshall, our surveyor, and Colonel Muter, one of our judges, decidedly in favor of separation from the United States, and of an alliance with Spain. At first, these two men had expressed this same opinion with warmth, but now their feelings have taken a different direction, from private motives of interest and personal pique; for which reasons I have very little to dread from their influence; but, at the same time, I foresaw that they would avail themselves of the opposition made by some literary demagogues, who were under the influence of fear and prejudice. Nevertheless, I determined to lay the question before our Convention, and I took the necessary measures accordingly.

"I was thus occupied until the 28th of July, on which day our Convention met at Danville, in conformity with the ordinance you saw in the Gazette which I sent you by Major Dunn."*

Of the proceedings in the Convention he says:—

"The Convention was of opinion that our proposed independence and separation from Virginia not being ratified, its mission and powers were at an end, and we found ourselves in the alternative, either of proceeding to declare our independence, or of waiting according to the recommendation of Congress. This was the state of affairs, when the Honorable Caleb Wallace, one of our Supreme Judges, the Attorney-General Innis, and Benjamin Sebastian proposed a prompt separation from the American Union, and advocated with intrepidity the necessity of the measure. The artifice of Congress was exposed, its proceedings reprobated, the consequences of depending on a body whose interests were opposed to ours were depicted in the most vivid colors, and the strongest motives were set forth to justify the separation. The arguments used were unanswerable, and no opposition was manifested in the course of the debates. It was unanimously conce-

* Gayarre, p. 225.

ded that the present connection was injurious to our interests, and that it could not last any length of time. Nevertheless, sir, when the question was finally taken, fear and folly prevailed against reason and judgment. It was thought safer and more convenient to adhere to the recommendation of Congress, and, in consequence, it was decided that the people be advised to elect a new Convention, which should meet in the month of November, in conformity with the ordinance which you will find in the Gazette, No. 2."

On the meeting of the next Convention, Wilkinson found that Marshall and Muter had been scattering distrusts and apprehensions among the people, to such an extent, that his cause was greatly injured, and he therefore did not bring it before the Convention. He ascribed his defeat, in a letter to Miró, to the machinations of "silly demagogues."

Wilkinson's correspondence with Miró—given in full by Mr. Gayarre—shows that his reasons for a separation of Kentucky from the Union were different from those assigned by the people of Kentucky, who complained of heavy taxes, and above all, of the closure of the navigation of the Mississippi. Wilkinson urges upon Miró the necessity of the Mississippi being kept closed, as the only means that could render the separation of Kentucky possible; and he contends

"That the true policy would be to keep the Mississippi closed, and to make of emigration the principal object to be obtained, and Spain would always have the power, through some agents of an eminent rank here, to draw to her the most respectable portion of the population of this district. Hundreds have applied to me on this subject, who are determined to follow my example, and I do not deceive myself; nor do I deceive you, sir, when I affirm that it is in my power to lead a large body of the most opulent and most respectable of my fellow-citizens whither I shall go myself at their head, and I flatter myself that, after the dangers I have run and the sacrifices which I have made, after having put my honor and my life in your hands, you can have no doubts of my favorable dispositions towards the interests of his Catholic Majesty, as long as my poor services shall be necessary."

"After having read these remarks, you will be surprised at being informed, that lately I have, jointly with several gentlemen of this country, applied to Don Diego Gardoqui for a cession of land, in order to form a settlement on the river Yazoo. The motive of this application is to procure a place of refuge for myself and my adherents, in case it should become necessary for us to retire from this country, in order to avoid the resentment of Congress. It is true that there is not, so far, the slightest appearance of it, but it is judicious to provide for all possible contingencies."

The events of the last Convention, held at Danville, Ky., in November, 1789, evidently filled Wilkinson with alarm, and he began seriously to look about for a place of safety. He writes to Miró that he knows that his proceedings are discovered, and that he suspects that it is through the correspondence of Gardoqui, the Spanish Minister. Wilkinson had also seen the following letter of General St. Clair to Major Dunn, dated December 5, 1788:—

"Dear Dunn," said he, "I am much grieved to hear that there are strong dispositions on the part of the people of Kentucky to break off their connection with the United States, and that our friend Wilkinson is at the head of this affair. Such a consummation would involve the United States in the greatest difficulties, and would completely ruin this country. Should there be any foundation for these reports, for God's sake, make use of your influence to detach Wilkinson from that party."

While Wilkinson was meditating what steps next to take, there arrived at his house in Louisville, Ky., on the 8th of November, 1789, a British Colonel named Connelly, an agent of the British government. Wilkinson, in his letter to Miró, says:*

"Suspecting the nature of the negotiation he had on hand, I determined, in order to discover his secret views, to be beforehand with him, and to invite him here. Consequently he came to my house on the 8th of November. I received him courteously, and, as I manifested favorable dispositions towards the interests of his Britannic Majesty, I soon gained his confidence—so much so, that he informed me that Great Britain, desiring to assist the American settlers in the West, in their efforts to open the navigation of the Mississippi, would join them with ready zeal, to dispossess Spain of Louisiana. He remarked that the forces in Canada were not sufficient to send detachments of them to us, but that Lord Dorchester would supply us with all the implements of war, and with money, clothing, &c. to equip ten thousand men, if we wished to engage in that enterprise. He added that, as soon as our plan of operation should be agreed upon, these articles would be sent from Detroit, through Lake Erie, to the river Miami, and thence to the Wabash, to be transported to any designated point on the Ohio, and that a fleet of light vessels would be ready at Jamaica to take possession of the Balize, at the same time that we should make an attack from above. He assured me that he was authorized by Lord Dorchester to confer honors and other rewards on the men of influence who should enter on that enterprise, and that all those who were officers in the late continental army should be provided with the same grade in the service of Great Britain. He urged me much to favor his designs, offering me what rank and emoluments I might wish for, and telling me at the same time that he was empowered to grant commissions for the raising of two regiments which he hoped to form in Kentucky. After having pumped out of him all that I wished to know, I began to weaken his hopes by observing that the feelings of animosity engendered by the late revolution were so recent in the hearts of the Americans, that I considered it impossible to entice them into an alliance with Great Britain; that, in this district, particularly in that part of it where the inhabitants had suffered so much from the barbarous hostilities of the Indians, which were attributed to British influence, the resentment of every individual was much more intense and implacable. In order to justify this opinion of mine and induce him to go back, I employed a hunter, who feigned attempting his life. The pretext assumed by the hunter was the avenging of the death of his son, murdered by the Indians at the supposed instigation of the English. As I hold the commission of a Civil Judge, it was, of course, to be my duty to protect him against the pretended murderer, whom I caused to be arrested and held in custody. I availed myself of this circumstance to communicate to Connelly my fear of not being able to answer for the security of his person, and I expressed my doubts whether he could escape with life. It alarmed him so much, that he begged me to give him an escort to conduct him out of our territory,

* Gayarre, pp. 236-7.

which I readily assented to, and on the 20th of November, he recrossed the Ohio on his way back to Detroit. I did not dismiss him without having previously impressed upon him the propriety of informing me, in as short a time as possible, of the ultimate designs of Lord Dorchester. As this man was under the protection of the laws of nations, and as he carefully avoided to commit any offence against our government, I considered the measure I had resorted to as the most appropriate to destroy his hopes with regard to this country, and I think that the relation he will make on his return to Canada will produce the desired effect. But should the British be disposed to renew the same attempt, as it may very well turn out to be the case, I shall be ready to oppose and crush it in the bud.'

In the same letter to Miró, he says :

"I deem it useless to mention to a gentleman well versed in political history, that the great spring and prime mover in all negotiations is *money*. Although not being authorized by you to do so, yet I found it necessary to use this lever, in order to confirm some of our most eminent citizens in their attachment to our cause, and to supply others with the means of operating with vigor. For these objects I have advanced five thousand dollars out of my own funds, and half of this sum, applied opportunely, would attract Marshall and Muter on our side, but it is now impossible for me to disburse it."*

Thus far it did not appear that the Spanish Minister, Don Diego Gardoqui, had any designs further than to populate Louisiana; but, in Wilkinson's next letter to Miró, dated February 14th, 1789, the Spanish Minister is also implicated, together with a member of Congress. Wilkinson says :—

"Don Diego Gardoqui, about the month of March last, received from his court ample powers to make with the people of this district the arrangements he might think proper, in order to estrange them from the United States and induce them to form an alliance with Spain. I received this information, in the first place, from Mr. Brown, the member of Congress for this district, who, since the taking into consideration of our application to be admitted into the Union has been suspended, entered into some free communications on this matter with Don Diego Gardoqui. He returned here in September last, and, finding that there had been some opposition to our project, he almost abandoned the cause in despair, and positively refused to advocate in public the propositions of Don Diego Gardoqui, as he deemed them fatal to our cause. Brown is one of our deputies or agents; he is a young man of respectable talents, but timid, without political experience, and with very little knowledge of the world. Nevertheless, as he firmly perseveres in his adherence to our interests, we have sent him to the new Congress, apparently as our representative, but in reality as a spy on the actions of that body. I would myself have undertaken that charge, but I did not, for two reasons: first, my presence was necessary here; and next, I should have found myself under the obligation of swearing to support the new government, which I am in duty bound to oppose."

The failure of Wilkinson in the Kentucky Convention terminated his scheme of separating the great West from the United States. Miró was bitterly disappointed, and lost much of his confidence in him; he recommended, however, that the govern-

* Gayarre, p. 239.

ment of Spain retain Wilkinson as an agent, with a salary of \$2,000; and that Sebastian be also retained, with a salary, to watch Wilkinson.

It would be an agreeable task to follow Mr. Gayarre's history to its close, for every page of it is replete with interest. But we fear that we have already exceeded the limits allotted to the pages of the REVIEW. The work has all of the absorbing interest of a romance, while it is, at the same time, veritable history—history too, that has never before been given to the world.

Art. II.—PROGRESS OF GEOGRAPHICAL SCIENCE.

ADDRESS DELIVERED BY M. F. MAURY, LL.D., LIEUT. U. S. N., AT THE ANNUAL MEETING OF THE AMERICAN GEOGRAPHICAL AND STATISTICAL SOCIETY.

THE return of the period for the Annual Address suggests a review, though brief, of the progress which has recently been made in the science which it is the especial object of the American Geographical Society to promote.

These annual addresses, and the impressions which they make in the history of societies, serve, as we drift along down the stream of time, as landmarks, as points of departure, from which we may look back, and by looking back, judge the more wisely what tack to go upon, what new course to shape. The mariner watches the progress of his vessel from hour to hour upon the high seas. Although during the voyage he constantly looks ahead to his port of destination, he does not forget occasionally to glance back to the haven whence he sailed, that seeing how far he has come, he may the better measure how far he has still to go. When the retrospect is satisfactory, it is also encouraging—for by cheering the spirit it helps one along. So, too, on occasions like the present, when the friends of human progress, in this or in that department of knowledge, meet together at stated periods, it is good to glance back as well as to look forward. The co-laborers and friends in the cause of the American Geographical and Statistical Society are now assembled for the purpose of hearing the annual address of the Society.

If we now pass, though never so hastily, in review the progress that has been made in geographical discovery and improvement during the last year, the members of this Society, too, like the master of the well-managed ship upon the trackless ocean, will, I have no doubt, derive encouragement from the retrospect, and enter upon the labors of the new geographical year with stouter hearts and braver minds.

The geographical problem that for ages has baffled the world, has been solved during the past year.

Though no ship has yet actually made the Northwest Passage, yet navigators coming from the West, and navigators coming from the East, have met together, and shaken hands across the ice; Lieut. Cresswell, of Her Majesty's Navy, entering the Arctic Ocean through Bhering's Straits in the "Investigator," has sailed and travelled, and sailed, until to him belongs the distinction of having been the first to put a girdle round about this great continent of the new world.

Commander McClure, of Her Majesty's ship "Investigator," doubled Cape Horn in the spring of 1850, on a voyage to the Arctic regions, in search of Sir John Franklin and his companions.

Entering Bhering's Straits, he parted company with Her Majesty's ship "Herald," Capt. Kellett, off Cape Lisburne, July 31, 1850, and was last seen six days afterwards on that side, standing to the northward and eastward with studding sails set.

There Kellett left him to return to England.

The next time he was seen on the 6th of April, 1853, in the Bay of Mercy, by Lieut. Pim, who was serving under Kellett.

Thus Kellett and his officers were the last to bid McClure "God speed" on the West, and to give him the helping hand of welcome on the East.

To McClure belongs the high honor of putting to rest this vexed question of a Northwest Passage. On the 26th day of October, 1850, being on a travelling party, he established the fact, that the Strait between Baring Island and Prince Albert Land, which he calls Prince of Wales Strait, and in which his ship was, connects itself by water and ice with Baffin's Bay, through Melville Sound, Barrow Strait, and Lancaster Sound.

This is the question that has vexed old England for centuries.

The problem of a short cut to "Cathay," of a passage to the East, is the most important geographical problem that has ever engaged the attention of enlightened, civilized societies. It was this problem that led to the discovery of the New World, and after this continent was discovered, and portioned out among the kings of the earth, a passage Westward to the Indies was still the grand problem. At this very moment the subject of a railway to the Pacific, of canals across the Isthmus, and their bearings upon that self-same land of Cathay, fill a large space in the public mind. So that we have not yet done with this interesting problem, though nearly four centuries have elapsed since it was first taken up.

If a *bonâ fide* Northwest Passage, one that could be available

at all times, and that would afford a passage to merchantmen, could really have been found, it would have placed England almost as near to China as she now is to the Isthmus of Panama. Accordingly we find her, whenever, during the last three hundred years, she has had a respite from war, pushing forward her expeditions for the discovery of this passage. Indeed, since the last European War, and during the long peace which has followed it, her efforts at a Northwest Passage have been, up to this hour, almost incessant. All honor, therefore, to Captain McClure for having settled this question.

It is true, the whales of the sea, in their mute way, had signified that there was a water communication from one side of this continent to the other, for we find the same kind of whale in Baffin's Bay that is found in Bhering's Straits, and know that the Torrid Zone is to this animal as a sea of fire, through which he cannot pass. The right whale of Bhering's Straits, it was proved, never could double Cape Horn or the Cape of Good Hope. In fact, he could not either cross over the Equator, or pass over into the Southern Hemisphere at all. Therefore, when the same whale that was found in Bhering's Straits was seen also in Baffin's Bay, the conclusion was almost irresistible that there was a Northwest Passage, and the whales knew of it.*

The currents of the sea also had indicated that there was water communication from one side to the other.

* "Whales harpooned in the Greenland seas, have been frequently caught in the Pacific," and *vice versa*.

"A Dutch Captain, Jacob Cool, of Sardam, was informed by the Fiscal Zee-man, of India, that a whale, caught in the Sea of Tartary, had in his back a Dutch harpoon, marked W. B., which harpoon was identified as belonging to William Bastiaanz, Admiral of the Dutch Whaling Fleet; the whale had been struck in the Spitzbergen Seas.

"In Müller's Voyages, it is related that the crew of a Russian Discovery Ship, while wintering on the west coast of Kamschatka, found on the beach the carcass of a whale, in which was a harpoon of European workmanship, marked with Roman letters.

"Hendrick Hamel, in his *unfortunate voyage of the Yacht Sparicer*, corroborates Müller. He says that in the sea to the northeast of Korea, they take every year a great number of whales, in some of which are found harpoons of the French and Dutch, who practise the fishery at the extremities of Europe; whence we infer (A. D. 1653) that there is surely a passage between Korea and Japan which communicates to the Strait of Weigatz, separating Nova Zembla from the continent of Europe.

"In 1813 a whale was killed by the ship Volunteer, of Whitby, off Spitzbergen, in which was found part of a lance, made of a hard gray stone, of a flinty appearance, about three inches long, two inches broad, and 2-10 of an inch thick; with two small holes, as if for the purpose of lashing the stock or shaft.

"In 1812, in the Spitzbergen Seas, the Aurora, of Hull, took a whale having a harpoon of bone stuck in his back.

"The Esquimaux, from their frequent intercourse with Europeans, have long used iron implements; so that those of stone and bone must have belonged to some tribes on the unexplored Northern face of the American continent."—*Scoresby's Arctic Regions*.

And philosophers, consulting the agents which control the winds, and studying the developments of nature, had gathered data from those regions, tending to prove the same thing. Yet, notwithstanding these probabilities, and this amount of circumstantial evidence, the question of an open sea in the Polar Basin has been left as a scientific question, in the category of an unsolved problem.

McClure's track was, for the most part, along the coast; and, therefore, he could not throw much light upon the question of an open sea in the Arctic Ocean.

But as for the Northwest Passage, money, time, and the lives of many gallant sailors, had been offered up in the effort to find this communication. The problem was too important, the national mind of a self-relying and a proud people was too deeply interested, to admit, after such sacrifices, any other evidence as conclusive, short of that which appeals to the senses, and comes within the category of proof positive. All honor, therefore, to Commander McClure and his gallant crew, who have wrung from the iceberg and barrier, from privation and danger, this proof. I hope, and I am sure this Society will heartily join me in the wish, that, at our next annual address, your orator will have the pleasure of calling him "Admiral McClure," for I consider he has performed a most important work.

The geographical fact that he has established, viz., that there is no practicable way through the Northwest to the "Indies," is, next to the discovery of a practicable way, the most important discovery that it was possible to make in those regions. Call it a negative discovery, if you please; negative results are to him who is in search of truth, sometimes in the importance of their bearings, equal to and altogether as reliable, as positive.

Cui-bono?

Does any one ask the question? Why, the energies of Great Britain—of the most powerful nation that has ever yet culminated in its greatness, have been directed to a passage there. And they have been directed with an intensity and with an interest that have diverted the mind of a great people from other and perhaps more utilitarian enterprises. The money which that nation has expended from first to last in the search of that passage would, with its interest, nearly suffice now to connect the two oceans by a canal across the Isthmus. Her own officers have at last demonstrated that there is no practicable route to the Northwest. The attention, therefore, of that great nation and people will now, no doubt, be as earnestly directed to some practicable route, either by railway or canal across the continent, as it has been to an impracticable route.

The Northwest Passage is a subject which has, from peculiar circumstances, occupied a large share of attention before

this Society. Its Vice-President has been munificent towards it. He has fitted out an expedition for search and discovery there, which has made his name respected and revered wherever true nobleness is admired or deeds of humanity cherished.

British officers and the British Admiralty have been charged, in the hearing of this Society, with wrong to this expedition.

The claims of Lieut. De Haven, it was alleged, have not only not been acknowledged in England, but the credit due for the discoveries of this expedition has been taken away from those on this side of the water, to whom honor is due, and given to those on that, who, rightfully, have neither part nor lot in the matter.

These charges were made by a member of this Society,* and not without show of reason; for I hold in my hand a chart published on the 14th of October, 1853, at the Hydrographic Office of the Admiralty, entitled,

"CHART showing the Northwest Passage Discovered by H. M. Ship Investigator; also the Coast Explored in Search of Sir John Franklin, by Sir James Ross, 1843-9; Sir John Richardson, 1848-9; Capt. McClure, 1850; Capt. Austen, 1850; Mr. Penny, 1850; Mr. Rae, 1851; Mr. Kennedy and M. Bellot, 1852; Capt. Inglefield, 1852-3; Capt. Sir Edward Belcher, 1852-3. By E. A. Inglefield, Commander H. M. Ship Phoenix. Hydrographic Office, Admiralty, 14th October, 1853."

In this chart Lieut. De Haven and the Grinnell Expedition are ignored, and the discoveries made by them given to Penny and Belcher.

The mere appearance of wrong from such a quarter, to an expedition fitted out under the circumstances which characterized the Grinnell Expedition, could not fail to attract the attention both of the government and people of the United States.†

It is a misfortune that matters of scientific concern should ever serve to excite international controversy, or whet popular jealousies and national animosities.

Men of science, as such, know no internationality. They owe allegiance to but one power, and that is TRUTH; and they are all fellow-citizens alike of the great Republic of Science.

That any British officer, from the highest Admiral down to the youngest midshipman, could find it in his heart to do any one the slightest wrong in the matter of this Grinnell Expedition, I never could imagine.

I am, therefore, the more happy to announce to this Society,

* See paper entitled "Grinnell Land" read before the National Institute, Washington, in May, 1852, by Col. Peter Force; also paper entitled "Supplement to Grinnell Land," read before National Institute, July, 1853, by Col. Force.

† See Remarks upon it made by the Secretary of the Navy in his last Annual Report to Congress.

that last night a newly revised Admiralty Chart was placed in my hands by a friend. It is entitled, "Discoveries in the Arctic Sea up to 1853," and has the stamp of the Hydrographic Office of Great Britain upon it.

Its actual date of publication is, I take it, subsequent to that of October, to which I have just alluded.

I have not had time to examine this new chart thoroughly; but as far as I have had an opportunity of looking over it, it gives me pleasure to say it is all right, with the single exception of the Grinnell Land and Mount Franklin of De Haven.

The Grinnell Land of De Haven has been on former Admiralty charts, called Prince Albert Land. On this chart, the name "Prince Albert Land" is omitted, but the name of Grinnell Land has not been restored.

I think it ought to be restored.

Mount Franklin was never reached by De Haven. It was simply seen bearing N. N. E. in the distance from the highest point in latitude reached by him. Whether it was twenty or sixty miles off, he knew not.

On this revised Admiralty chart, it is placed upon the shore of Wellington Channel, notwithstanding that Belcher reports as he went along up that channel, that he saw nothing of the Mount Franklin of De Haven on that shore.

But doubling around the peninsula which separates Wellington Channel from Jones' Sound, he travelled in a south-eastwardly direction, and ascended a mountain 1,500 feet high on the opposite side of this peninsula.

This, I have no doubt, is the Mount Franklin of De Haven. It is in the direction that he gives it from the highest point of latitude reached by him; and as to its existence, he has said to me over and over again, "There can be no doubt, for it was as palpable before my eyes as your face now is. How far it was from me I cannot say, but far or near, upon that N. N. E. line it stands, and there it will be found by whomsoever it may be sought."

There is no evidence that there is any elevation deserving the name of "Mount" on the Wellington side of this peninsula, where this chart places the Mount Franklin. But upon the true line of bearing described by De Haven, a Mount has been found. I think, therefore, that Belcher's "Elevation of 1,500 feet" on this chart is what De Haven saw and named in honor of the lost navigator, and that it ought to be so called on all charts.

I have deemed it a duty to the science to which we render homage, to say thus much upon this subject. For I am sure all that is necessary to cause the Admiralty chart of October, 1853, to be entirely suppressed, and to cause what is right to be done touching the Grinnell Land and Mount Franklin on the more

recent charts, is to invite, in a truth-loving spirit, the attention of the Royal Geographical Society, or any other English authority, to the subject.

That Society, like the great body of the English nation, is composed of men who love right and hate wrong, and in whose sense of justice I have great reliance.

I congratulate the Society upon the activity that has been and is now displayed by our own government and fellow-citizens in the various fields of geographical research. Kane, of the Navy, is now on a second expedition to the Arctic regions in search of Sir John Franklin and of Geographical lore. That expedition was, I may say, started here in this Society, and therefore, I need only remind you that our latest intelligence from it was 20th July, 1853, when it had safely arrived at Upernavik.

In 1850, Lieut. Wm. L. Herndon, United States Navy, was sent to explore the valley of the Amazon. He was directed to cross over the Andes from Lima, and reaching the head waters of that river, he was to follow it to the sea.

The object of this expedition was eminently practical and highly important. It was to ascertain the present resources and future capabilities for trade and commerce of that magnificent water-shed.

His Report has been published by order of Congress, and it will be found one of the most interesting, instructive, and valuable documents of the day. He ran a line of soundings from the sources of the Amazon, among the mountains, to its mouth under the line, and found it navigable for vessels of the largest class, from the sea to the base of the Andes, a distance of nearly 3,500 miles. This expedition, besides the notes of its leader, brought home a valuable collection consisting of specimens of the *flora* and the *fauna* and other matter, illustrative of the physical geography of that most interesting region of country. These have not been described for want of funds—\$2,500. Surely the government will furnish this sum, for if this collection were worth sending for, it is certainly worth description.

There is a close relation between the fauna and the flora of every country. The animal kingdom is based upon the vegetable, and the flora, if you please, may be considered as the resultant of meteorological agencies—of heat and cold, of clouds and sunshine, of rain, dews, and the hygrometrical relations generally of the atmosphere. Now whatever is calculated to throw light upon these conditions, has a bearing upon your favorite science, for the fauna and the flora of a country constitute the most striking features in its physical geography.

The capacities of the country drained by the Amazon to sustain population are thought to be the greatest in the world, and with a population equalling that of Belgium to the square mile—

that river basin includes an area that is large enough to sustain a population of *Six Hundred Millions*. Its seed-time is perpetual, its harvests never end, and its capacity to sustain population has been computed to be fourfold that of Belgium.

The winds and currents of the sea are such as to place the Atlantic ports of the United States on the wayside of all nations, either going or coming from the mouth of the Amazon. Therefore, there is no region of country beyond our own borders, the physical geography of which is more interesting to the people of the United States.

Commerce, or rather produce, the basis of commerce, may be regarded as one of the exponents of physical geography; for explain to me the physical geography of a country, and I will tell you of what productions it is capable. In this sense, therefore, all South America is calculated to be peculiarly interesting to the American citizen, because it has in the future such powerful bearings upon the commerce of his country.

One of the most striking features about the Amazon is well described by a sailor boy that belonged to Herndon's expedition. It bears upon the geography of that country, because it is illustrative of its present condition, and therefore I may be excused for quoting it.

Richards is a young man, who, without the advantages of a liberal education, had been brought up on a farm in Virginia. He had shipped on board the U. S. frigate *Raritan* for a cruise in the Pacific. Leaving that ship, he joined Herndon's party in Lima. He had seen the waves in their majesty, and the storm in its grandeur, off Cape Horn. In his voyage to the Amazon, and across the Andes, he had visited the famous quicksilver mines of Huancavalica and had walked through its modern monolithic caves, whose pink-stained arches, groins and columns are of the richest myths—the classic Titicaca of the Incas—and crossed the river Desaguadero, running from it, and which the natives assured him, sometimes running back up stream, empties into it. He had crossed the Andes where the scenery was wildness itself.

Descending their Eastern slopes, he had been enabled at one view to comprehend the whole range of the vegetable gamut from the regions of eternal snow on the mountain peaks, to the luscious climes of everlasting summer in the plains below. And in these plains he had seen the vegetable kingdom rioting in new forms and teeming with new fruits—a tree whose fruit is bread, standing to the native in place of a bakery; another, which, with its juice, performs to him the office of a cow; and another, whose nuts stand him in the stead of candles; and another that grew and flourished in spite of the "Maine Liquor Law," for it was itself a natural distillery.

These were things, and objects, and scenes, well calculated to make powerful impressions upon a mind like Richards', and wondering which of them had made the strongest, I said, "Pray, Mr. Richards, what of all that you have seen during this most interesting expedition struck you as being the most strange?" "What struck me as the most strange and wonderful?" "Yes." "Why, that such a country as is the valley of the Amazon should, in the middle of the 19th century, be a wilderness."

To the glory of the Republic, be it said, no moves by the State are hailed with more enthusiasm by the popular voice than those which have for their object the opening up by the lights of science and the arts of peace, of new fields to commercial enterprise or the extending of those already opened. It is to be hoped that we may soon see properly equipped expeditions steaming up the Amazon, and its magnificent tributaries, for exploration and discovery; for Herndon was necessarily so restricted as to equipment, that he could do but little more than one can who should undertake to drift down that river on a log.

Some of the strongest contrasts in geography are, perhaps, to be found in the region of country drained by this mighty river. The late Gen. Illingworth, an Englishman, and a soldier of great worth, who joined the patriot cause of South America at its dawn, and who died but a few months ago, holding the office of Secretary of State in the Republic of Ecuador, mentions, in a letter written not long before his death, one of those mountain, plain, sea, and river contrasts, the like of which is, perhaps, nowhere else to be seen. In speaking of the Amazonian tributaries of Ecuador, he says:—

"I cannot, however, but repeat here, that a singular topographical phenomenon presents itself in the Ecuadorean section of the Andes. At the back, or to the eastward of Ambato, some unknown convulsion of nature has broken the chain of the Cordilleras, and opened a vast gap or chasm, from west to east, where the deep stream of the Pastaza is formed, receiving the waters of the peopled districts of Riobamba, Ambato, and Latacunga. It may be supposed, therefore, that a person on an elevated point, near Ambato, and with a favorable atmosphere, might see the Pacific Ocean, and the course of the tributary Pastaza, descending through the Amazon to the Atlantic Ocean. In the month of September, 1821, and on an elevation a few leagues to the westward of Ambato, I had the pleasure of viewing the above-mentioned gap in the Andes; and, on facing to the westward, I beheld, for a full quarter of an hour, the line of our coast, the Island of Puna, and the dark blue shade of the Pacific Ocean. The sun was setting, and the evening clear."

There, with the waters of a navigable river at his feet, coursing down to the Atlantic on one hand, he saw on the other the

island of Puna, in the Gulf of Guayaquil, the great South Sea, and the Pacific shores of his own little Republic.

Lieut. Page, in the United States steamer *Water-Witch*, with a complement of most excellent officers, is engaged in an exploration of the Rio de La Plata, and its tributaries. This river is the Mississippi of the Southern Hemisphere. Lieut. Page is well supplied with instruments and means. He has with him a photographic apparatus, with all the appliances which ingenuity has lent to modern geographical research. He and his officers know what to do with them. They love work, and rejoice in their mission. I expect, therefore, when his survey is done, that we shall know much about the basin of that river, its commercial resources, active and dormant; its present capabilities and future capacities—in short, that the geography, in its widest sense, of that great hydrographic basin, will be then quite as well understood as that of our own Missouri.

My last letter from him is dated October 1st, 1853. He was then with his steamer at the city of Ascencion, on the Paraguay River. He had not found a single bar, sand-bank, or sawyer, to interrupt his progress. On the contrary, he carried twenty feet of water up to the city, which is farther from the mouth of the Rio de La Plata than St. Louis is from the mouth of the Mississippi.

Lieut. Gilliss, U. S. N., is preparing for publication his labors as the Director of the Astronomical Expedition to Chili. He is an officer of the most untiring industry, and we may expect from him valuable contributions to our knowledge touching the geography and statistics of that interesting country.

Lieut. McRae, one of his associates, who returned to the United States, by crossing the Pampas of Buenos Ayres, has gone back to make further investigations. He too will, in due time, be ready with his mite, to cast it into the common geographical treasury of the world.

Lieut. Chas. H. Davis is diligently at work with the second number of the American Nautical Almanac. That work, so creditable to its conductor, so honorable to the country, so beneficial to its commercial and navigating interests, will be mighty in the cause of geographical science. That other great geographical problem, which has engaged the attention of the world as long as the Northwest Passage—and has been a day-dream with the men of England, has not escaped the attention of government in these stirring geographical times.

The project of a Ship Canal across the Isthmus of Darien has been renewed, and it is about to be presented to the world, under more favorable auspices than it has ever yet been. Lieut. Strain, U. S. N., sailed last December, with an excellent corps of young officers, in the United States steamer *Cyane*, for

the purpose of examining that route thoroughly. There is, therefore, in store among the labors of that party, another valuable contribution to the general stock of human knowledge.

Anchoring in Caledonia Bay, on this side, he will, from that beautiful sheet of water, enter the valley of the river Caledonia, which discharges there, and tracing this water shed to the "divide" between the two oceans, he will cross over, and descend through the valley of the Savannah River, to the Bay of San Miguel—another fine harbor, through which the waters of this river reach the great South Sea.

America has done but little for the geography, in one sense, of the "grand ocean," as some of the early navigators called the Pacific, since Lieut. Wilkes was there about fifteen years ago. But fresh instalments to the geographical treasury of the world are already on their way home from those regions, and a new expedition is on its way out for more.

Commodore Perry, with his accustomed energy, has already had surveys made of several important places in the East, among them, the harbor of Jeddo, which is described by his officers as one of the boldest and most beautiful sheets of water in the world, not excepting the harbor of San Francisco, or of Naples, or of Rio, nor your own lovely bay. "We ascended," says Lieutenant Bent, of the Mississippi, in a private letter, "to within about seven miles (in a straight line) of Jeddo, carrying from 40 to 17 fathoms water all the way. This was nineteen miles nearer the capital than any foreign vessel had ever previously been. This occurred after the reception, (of which I will speak presently ;) and as everything had gone on very successfully, the Commodore did not wish to do anything that would militate against the advantages we had obtained, or he would have gone, I imagine, in sight of the city, which was hidden from us only by a point of land some three miles ahead.

"This is the finest sheet of water in the world, not excepting Rio and San Francisco. Thirty-five by twenty-five miles in diameter, surrounded by numerous snug coves, and most lovely shores, it contains not a single island, except close along its borders, and seems perfectly clear from obstructions of any kind to navigation. It connects with the ocean by a strait, ranging from ten to fifteen miles in width, and forty fathoms in depth." He is constructing a chart of that harbor.

Ringgold, with his squadron, has just about this time entered fairly upon the field of his operations, which includes the North Pacific Ocean, with its arms, straits, and gulfs. That is the largest surveying squadron now afloat under any flag. And never has any nation sent forth an expedition in the cause of science better fitted and found than that is. For accurate work and practical results it has with all the means and appliances that government,

in the indulgence of an enlightened liberality, could suggest, or that science, ingenuity, and the improvements of the age, could bestow. His squadron consists of five vessels. He is assisted by a corps of young and accomplished officers, who have entered upon this service with him *con amore*.

These constitute the element of success. We may expect, therefore, in the course of the next three years, much valuable information concerning the North Pacific Ocean; for discoveries and results, as fast as made and obtained, are to be sent home to the Hydrographical Bureau of the Navy, for publication.

Thus we have, or will have, to enrich our archives, De Haven and Kane in the Frozen Sea; Strain and Herndon, with Gibbon his companion, in the Torrid Zone; Perry and Ringgold in the East, with Page, and Gilliss, and McRae, in the West.

Nor should I forget the line of deep-sea soundings, especially, which was run last summer by Lieut. Berryman, commanding United States brig Dolphin, from the neighborhood of Newfoundland to that of Ireland. That line has important and practical bearings upon the question of a Submarine Telegraph between Europe and America. There is bottom for it.

From Newfoundland to Ireland the distance between the nearest points is about 1,600 miles, and the bottom of the sea between the two places is a plateau, which seems to have been placed there especially for the purpose of holding the wires of a Submarine Telegraph, and of keeping them out of harm's way. It is neither too deep nor too shallow. Yet it is so deep that the wires being once landed, will remain forever beyond the reach of vessels, anchors, icebergs, and drifts of any kind; and so shallow that the wires may be readily lodged upon the bottom.

The depth of this plateau is quite regular, gradually increasing from the shores of Newfoundland, to the depth of from 1,500 to 2,000 fathoms as you approach the other side.

The distance between Ireland and Cape Charles or Cape St. Louis, in Labrador, is somewhat less than the distance from any part of Ireland to the nearest point in Newfoundland.

I do not pretend to consider the question as to the possibility of finding a time calm enough, the sea smooth enough, a wire long enough to carry and lay a coil of wire 1,600 miles in length; though I have no fears but that the enterprise and ingenuity of the age, whenever called on with these problems, will be ready with a satisfactory and practical solution of them. I simply address myself at this time to the question, in so far as the bottom of the sea is concerned; and as far as the greatest practical difficulty will, I apprehend, be found, after reaching soundings at either end of the line, and not in the deep sea.

A wire, laid across from either of the above-named places on this side, would pass to the north of the Grand Banks, and rest on that beautiful plateau to which I have alluded, and where the water of the sea appears to be as quiet and as completely at rest as it is at the bottom of a mill-pond.

It is proper that the reasons should be stated for the inference that there are no perceptible currents, and no abrading agents at work at the bottom of the sea upon this telegraphic plateau.

I derive this inference from the study of a physical fact, which I little dreamed when I sought it, had any such bearings.

It is unnecessary to allude here to the rich germs which physical facts, apparently the most striking, are often found to contain. That great achievement which has harnessed the lightning and made one of the imponderable agents of the universe a messenger for man, has its root in the little physical fact that was first observed by a philosopher with regard to the legs of a dead frog.

So too with regard to these deep-sea soundings, and the carefully labelled specimens from the bottom. When asked, as I have often been, for the *cui bono* touching that last, I have found myself under the necessity of answering the question, by asking, with Franklin, "What is the use of the new-born babe?"

Berryman brought up, with Brooke's deep-sea sounding apparatus, specimens of the bottom from this plateau.

I sent them to Professor Bailey, of West Point, for examination under his microscope. This he kindly gave them, and that eminent microscopist was quite as much surprised to find, as I was to learn, that *all* these specimens of deep-sea soundings are filled with microscopic shells. "*Not a particle of sand or gravel exists in them.*"

These little shells, therefore, suggest the fact that there are no currents at the bottom of the sea whence they came; that Brooke's lead found them where they were deposited in their burial-place, after having lived and died on the surface, and by gradually sinking were lodged on the bottom.

Had there been currents at the bottom, there would have swept and abraded and mingled up with these microscopic remains, the debris of the bottom of the sea, such as ooze, sand, gravel, and other matter. But not a particle of sand or gravel was found among them. Hence the inference, that those depths of the sea were not disturbed, either by waves or currents.

Consequently a telegraphic wire once lodged there, there it would remain, as completely beyond the reach of accident as it would if buried in air-tight cases.

Therefore, so far as the bottom of the deep sea between Newfoundland, or the Northern Cape at the mouth of the St. Law-

rence and Ireland is concerned, the practicability of a submarine telegraph across the Atlantic is proved.

But while the Navy has been thus occupied in winning laurels as green—may I not say as *green*, because they are won in times of peace and in the cause of knowledge and of truth, in the advancement of science and in aid of that progress which is upward and onward—may I not therefore say as *GREEN* as any with which it is possible for the hand of grim-visaged war to deck the brows of victors in his battles of heroes in his cause?

But while the Navy has been thus busied abroad, the Army and other branches of the public service have not been idle at home. The Coast Survey is a long-established institution. A report of its proceedings is annually made to Congress. Gentlemen are familiar with the value of its labors, and therefore it is only necessary in this connection to refer to it as an establishment that has done and is doing much for those departments of knowledge which it is the especial object of this society to cultivate.

In the same category comes the Hydrographic Survey, by the Army, of the great American Lakes. That work, too, is being pushed forward even with more than its wonted vigor. It has already enriched one department of geography with an important discovery. You know it has been said that the bottom of Lake Huron especially, was far below the level of the sea. Captain Macomb informs me that nowhere in that lake has he been able to find water more than 420 feet deep, which places the bottom of that lake far above the surface of the sea.

The Mexican Boundary Commission is busily engaged in bringing up its results.

Besides these there are various parties at work exploring routes across the wilderness for the Great Pacific Railway. Lieutenant Williamson is on the Pacific slope running his lines with the spirit level and the theodolite. Gov. Stevens is at the North, Lieut. Whipple is at the South: and Gunnison—alas, poor Gunnison!—was in the middle.

Science has its achievements and peace its triumphs, yet how much does it not sometimes cost to win them! Lieut. Bellot, of the French Navy, upon the ice of the Polar Basin, Lieut. Gunnison, of the American Army, upon the great "divide" which separates the waters of the Atlantic from the waters of the Pacific, have each fallen victims to the cause of that science whose achievements we celebrate. Though far apart, they were fellow-laborers in the same cause. They both were in search of a commercial route to Cathay.

Two more gallant spirits, two men more richly endowed with

the accomplishments of officers, and the qualities of gentlemen, never fell before the ruthless hand of the savage, or the remorseless billows of the sea. The English have resolved to erect at Greenwich a monument to Bellot. Shall we be less mindful of our own than they are of strangers? No. Let us resolve, when this railroad is finished, to erect in the middle of it, and on some towering mountain-peak, a monument to that gallant young soldier. Place it on the summit of the highest hill-top, where it may catch the first rays of the morning sun as he rises from the Atlantic, and where his parting beams, as he sinks to rest in the Pacific, may linger longest.

Nor should I omit to mention among the valuable labors of the officers of the army, the very successful and interesting exploration of the Zuni River, by Captain Sitgreaves, U. S. Army, and his party. Much of the ground that this officer travelled over is new.

Besides these, Fremont and Beale have also been striving with the Indians, and struggling with the snows of that great "divide,"—the latter with that daring and gallantry which has challenged our admiration on former occasions, the former with a degree of zeal and energy that has seldom been equalled, never surpassed.

We owe to him much of our geographical information concerning that region of the country, and he has made contributions which have been acknowledged and appreciated wherever geography is cultivated as a science. An enthusiastic amateur, that brave explorer is now there at his own risk and expense, for the purpose of solving certain questions which in his former expeditions he was unable to resolve.

From this hasty review of what has been recently done and of what is doing for geography by the government and the people of the United States, it appears that few countries have ever at any time been able to boast of more activity in this department of scientific research and discovery. And which of these expeditions has not the public mind followed with interest, and pleasure, and profit? To the honor of our free institutions and of a free people be it said, not one. The popular will is in favor of them all.

But though much has been done, these researches and these expeditions have, as they have made their advances, served to extend the horizon, have given us new lights, and show us that much yet remains to be done. Prominent among the *agenda* of this society during the coming year, is to foster by its influence and its counsels another expedition up the Amazon like Page's in the La Plata. The Amazon is at our own doors, and we begin with it. I shall only allude to one other which cannot fail to commend itself to the good offices and favorable consid-

eration of this society, and that is the exploration of the Valley of the Amour in Mantchouria. This river I believe belongs to Russia, though its navigation was ceded to China by Peter the Great in 1689. That was before modern science and enterprise could have been brought to bear upon it; consequently, unless a party be sent to explore it from some of the States of Christendom, it will continue to rest in its present darkness for other centuries.

"In almost every point of view," says Findlay, in his Directory for the Pacific Ocean, published in 1851, "the Amour is the most valuable stream in Northern Asia. Of all the large rivers of that boundless region, it is the only one that empties itself into a navigable part of the universal ocean. It is, in fact, the only highway of nature that directly connects the central steppes of Asia with the rest of the world. But the political arrangements of man have decreed otherwise; and at this moment the Amour is infinitely less useful as a channel of traffic than almost any one of the land-locked rivers of Siberia. The navigation of the Amour was given, it is understood, for the privilege of holding a fair at Kiakhta, or establishing a factory at Pekin, which, according to Sir George Simpson, has turned out a poor compensation for the loss of this valuable artery to Central Asia; and by which cession the Russian possessions of Kamschatka and the islands beyond are reduced to half their value.

The researches concerning the winds and the currents of the sea, which have been carried on at the Observatory, enable me to say that the climate of that river basin corresponds to that of our lake basin, including the valley drained by the St. Lawrence, the Hudson, and the rivers of the New-England States generally. And what the commerce between these States and river basins with Europe is, such may be, and, in time, will be the commerce between the Amour and the Pacific States of this Union. China is in a state of revolution, and one of the first things after the revolutionists get firmly seated in power, will be, no doubt, an attempt on the part of the United States to form a commercial treaty with that people upon more liberal principles. And that this treaty might be made with eyes open, how important is it that our diplomatists should have full and complete information as to that immense Amour country, as to the navigation and navigability of that river, and as to its present capabilities and future capacities for trade and commerce. It is to be hoped that the enlightened statesman at the head of the Navy Department will, ere long, feel himself at liberty to organize such an expedition.

There has been set on foot during the last year another move by the United States, which, in the judgment of many, is calcu-

lated to have important and wholesome bearings upon the physical geography of the world. I allude to the Maritime Conference at Brussels, which was held by invitation of this government, and in which were represented, in the persons of twelve delegates, the principal maritime powers.

The labors of those twelve men, as they sat in conference around the table at Brussels, had for their object to convert every well-appointed ship, as she sails across the ocean, into a floating observatory, and to unite the whole sea-faring world into one general system of physical research. And thus an attempt, a well-directed attempt, has been made to bring the sea regularly within the domains of philosophical research. But the atmosphere embraces the land as well as the sea. It is a whole, and as such, its agencies, its phenomena, and its laws ought to be studied. And why should not the same concert of action and uniformity of observation which Holland, and Denmark, and Spain, and Portugal, Sweden, Russia, Norway, Belgium, Prussia, England and the United States have agreed, at the recommendation of the Brussels Conference, to extend to the sea,—why should not the same uniformity and concert be extended also to the land?

It is now proposed to convoke in Brussels a general Meteorological Congress, which shall consist of one or more delegates from every Christian nation, and that it shall be the duty of this assemblage to devise a plan of meteorological research, which, including both sea and land, may become universal. Quetelet and Kreil, Hanstein, Kupffer, Buys Ballot, Airy, Secchi, Lamont, Sabine, James, and Jansen, and Beechey, with a host of others, have expressed themselves in favor of it.

But, for it to commend itself to the favorable consideration of this society and to its active supporters, it is only necessary to say that the proposition is one which promises many highly important and useful results. Nor does it call either upon the government or individuals for any heavy expenditure.

As a consequence of the discoveries to which the investigations made by the Navy, touching the phenomena of the sea, have given rise, a new department of science has been added to the stores of human knowledge. Perhaps the expression is too strong; therefore, I will say the corner-stone for a new department of science has been laid, and I quote Humboldt for authority.

According to that great and wise man, a new branch of science has recently sprung up on this side of the water. It is styled Physical Geography of the Sea, and to the American Navy he ascribes the honor of originating it. As some of the first fruits of it, I have the pleasure of exhibiting to you two plates,*

* Vide Plates XIV. and XV., 6th Edition Maury's Sailing Directions.

one showing the shape of the basin which holds the waters of the Atlantic. This delineation is to the solid part of the earth's crust, which is under the water, what a map of the country is to its mountain ranges and other contrasts on the same solid crust above the sea level. The other is a vertical section from one side of the Atlantic to the other. These two delineations are the results of deep-sea soundings made by officers of the Navy.

These soundings were at first unsatisfactory, because the plan upon which they were conducted never contemplated bringing up the plummet; indeed, to bring it up from great depths was considered impracticable; therefore there was an uncertainty about them;—there was a feeling in the public mind of vagueness with regard to their results. How do you know that the plummet has reached the bottom? Let us have specimens, was the cry.

In this stage of the undertaking, a clever young officer of the Navy—Passed Midshipman J. M. Brooke, who was at the time serving with me at the Observatory, came to my relief, and supplied by his ingenuity the very desideratum which was so much wanted. He arranged a deep-sea sounding apparatus, so that when the plummet struck the bottom, it would become detached from the line, leaving attached to the latter a small iron bolt, which would bring up specimens from the bottom.

Last summer and fall Lieut. Berryman, of the *Dolphin*, gave this apparatus a fair trial, and brought up with it specimens from the bottom at the depth of 12,000 feet. Samples of these specimens were sent to Professor Bailey, of West Point, for examination under his microscope. He kindly undertook the study of them, and as his letter, reporting the result, is short, perhaps you will permit me to read it:—

“WEST POINT, Nov. 29, 1853.

“MY DEAR SIR—I am greatly obliged to you for the deep soundings you sent me last week, and I have looked at them with great interest. They are exactly what I wanted to get hold of—the bottom of the ocean at the depth of more than two miles! I hardly hoped ever to have a chance of examining—yet, thanks to Brooke's contrivance, we have it clean and free from grease, so that it can at once be put under the microscope. I was greatly delighted to find that all these deep soundings are filled with microscopic shells; not a particle of sand or gravel exists in them. They are chiefly made up of perfect little calcareous shells (*Foraminifera*,) and contain, also, a small number of silicious shells (*Diatomaceæ*.)

It is not probable that these animals lived at the depths where these shells are found, but I rather think that they inhabit the waters near the surface; and when they die their shells settle to

the bottom. With reference to this point, I shall be very glad to examine bottles of water from various depths which were brought home by the Dolphin, and any similar materials, either 'bottom' or water from other localities. I shall study them carefully. * * The results already obtained are of very great interest, and have many important bearings on geology and zoology. * *

"I hope you will induce as many as possible to collect soundings with Brooke's lead in all parts of the world, so that we can map out the animalculæ as you have the whales. Get your whalers also to collect mud from pancake ice, &c., in the polar regions—this is always full of interesting microscopic forms."

Truly, these results are suggestive: they seem to form but a slender clue, indeed—do these little mites of shells, by which the chambers of the deep are to be threaded, and mysteries of the ocean revealed; yet in right hands and to right minds, they are sure guides to both light and knowledge.

The first noticeable thing the microscope gives of these specimens is, that all of them are of the animal, not one of the mineral kingdom.

The ocean teems with life, we know. Of the four elements of the old philosophers—fire, earth, air and water, perhaps the sea most of all abounds with living creatures.

The space occupied on the surface of our planet, by the different families of animals, and their remains, is inversely as the size of the individual.

The smaller the animal the greater the space occupied by his remains. Though not invariably the case, yet this rule, to a certain extent, is true, and will, therefore, answer our present purposes, which are simply those of illustration.

Take the elephant and his remains, or a microscopic animal and his, and compare them. The contrast, as to space occupied, is as striking as that of the coral reef or island with the dimensions of the whale. The graveyard that would hold the coral-lines is larger than the graveyard that would hold the elephants.

As Professor Bailey remarks, the animalculæ, whose remains Brooke's lead has brought up from the bottom of the deep sea, probably did not live or die there. They would have had no light there, and their frail little textures would have been subjected in their growth to a pressure upon them of a column of water 12,000 feet high, equal to the weight of 400 atmospheres. They probably lived and died near the surface, where they could feel the genial influences of both light and heat, and were buried in the lichen caves below, after death.

Brooke's lead and the microscope, therefore, it would seem, are about to teach us to regard the ocean in a new light. Its bosom, which teems with animal life, its face, upon which time

writes no wrinkles, makes no impression, are, it would now seem, obedient to the great law of change as is any department whatever, either of the animal or the vegetable kingdom. It is now suggested that, henceforward, we should view the surface of the sea as a nursery, teeming with nascent organism; its depths, as the cemetery for families of living creatures that outnumber the sands on the sea-shore for multitude.

Where there is a nursery, hard by there will be found also a graveyard—such is the condition of the animal world. But it never occurred to us before, to consider the surface of the sea one wide nursery, its every ripple as a cradle, and its bottom as one vast burial-place.

On those parts of the solid portions of the earth's crust which are at the bottom of the atmosphere, various agents are at work, levelling both upward and downward. Heat and cold, rain and sunshine, the winds and the streams, all assisted by the forces of gravitation, are unceasingly washing away the high places, and as perpetually filling up the low.

But in contemplating the levelling agencies that are at work upon the solid portions of the crust of our planet which are at the bottom of the sea, we had come, almost, to the conclusion that these levelling agents are powerless there.

In the deep sea there are no abrading-processes at work; neither frosts nor rains are felt there; and the force of gravitation is so paralyzed down there, that it cannot use half its power, as on the dry land, in tearing the overhanging rock from the precipice and casting it down in the valley below.

When, therefore, I was treating of the basin of the Atlantic on another occasion, the imagination was disposed to regard the waters of the sea as a vast cushion placed between the air and the bottom of the ocean, to protect and defend it from these abrading agencies of the atmosphere.

The geological clock may, thought I, strike new periods; its hands may point to era after era; but so long as the ocean remains in its basin, so long as its bottom is covered with blue water, so long must the deep furrows and strong contrasts in the solid crust below, stand out ruggedly and boldly rugged. Nothing can fill up the hollows there; no agent now at work, that we know of, can descend into its depths and level off the floors of the sea.

But it now seems that we forget these oceans of animalculæ, that make the sea sparkle and glow with life. They are secreting from its surface solid matter for the very purpose of filling up those cavities below.

Those little marine insects are building their habitations at the surface, and when they die, their remains, in vast multitudes, sink down, and settle upon the bottom. They are the atoms

out of which mountains are formed—plains spread out. Our marl beds, the clay in our river bottoms, large portions of many of the great basins of the earth, are composed of the remains of just such little creatures as these, which the ingenuity of Brooke, and the industry of Berryman, have enabled us to fish up from the depth of more than two miles below the sea level.

These foraminifera, therefore, when living, may have been preparing the ingredients for the fruitful soil of a land that some earthquake or upheaval, in ages far away in the future, may be sent to cast up from the bottom of the sea.

The study of these "sunless treasures," recovered with so much ingenuity from the rich bottom of the sea, suggests new views concerning the physical economy of the ocean.

I have endeavored to show how sea-shells and marine insects may, by reason of the offices which they perform, be regarded as compensations in that exquisite system of physical machinery by which the harmonies of nature are preserved.

The treasures of the lead, and revelations of the microscope, present the insects of the sea in a new light. We behold them now, serving not only as compensations by which the motions of the water in its channels of circulation are regulated, but also acting as checks and balances, by which the equipoise between the solid and the fluid matter of the earth is preserved.

Should it be established that these microscopic creatures live at the surface, and are only buried at the bottom of the sea, we may then view them as conservators of the ocean; for, in the offices which they perform, they assist to preserve its status by maintaining the purity of its waters.

It is admitted that the salts of the sea come from the land, and that they consist of the soluble matter which the rains wash out from the fields, and which the rivers bring down to the sea.

The waters of the Mississippi and the Amazon, with all the streams and rivers of the world, both great and small, hold in solution large quantities of lime, soda, iron and other matter. They discharge annually into the sea an amount of this soluble matter, which, if precipitated and collected into one mass, would no doubt surprise and astonish the boldest speculator with its magnitude.

This soluble matter cannot be evaporated. Once in the ocean, there it must remain; and as the rivers are continually pouring in fresh supplies, the sea, it has been argued, must continue to become more and more salt.

Now the rivers convey to the sea this solid matter mixed with fresh water, which, being lighter than that of the ocean, remains for a considerable time at or near the surface. Here, the microscopic organisms of the deep-sea lead are continually at work, secreting this same lime and soda, &c., and extracting from the

sea-water all this solid matter as fast as the rivers bring it down and empty it into the sea.

Thus, we haul up from the deep sea specimens of dead animals, and recognize in them the remains of creatures which, though invisible to the naked eye, have nevertheless assigned to them a most important office in the physical economy of the universe, viz.: that of regulating the saltiness of the sea.

This suggests many contemplations. Among them, one in which the ocean is presented as a vast chemical bath, in which the solid parts of the earth are washed, filtered, and precipitated again on solid matter, but in a new form, and with fresh properties.

Doubtless, it is only a readaptation, though it may be in an improved form, of old, and perhaps effete matter, to the uses and well-being of man.

These are speculations merely; they may be fancies without foundations, but idle they are not, I am sure; for when we come to consider the agents by which the physical economy of this our earth is regulated, by which this or that result is brought about and accomplished in this beautiful system of terrestrial arrangements—we are utterly amazed at the offices which have been performed, the work which has been done by the animalculæ.

But whence come the little calcareous shells, which Brooke's lead has brought up in proof of its sounding from the depth of two miles and a quarter? Did they live in the surface waters immediately above? or in their *habitat* in some remote part of the sea, whence, at their death, the currents were sent forth as pall-bearers, with the command to deposit their remains where the plummet found them?

In this view, these little organisms become doubly interesting. When dead, the descent of the shell to its final resting-place would not, it may be supposed, be very rapid. It would partake of the motion of the sea-water in which it lived and died, and probably be carried along with it in its channels of circulation for many a long mile.

The microscope, under the eye of Erenberg, has enabled us to put tallies on the wings of the wind, to learn of them somewhat concerning "its circuits."

Now, may not these shells, which were so fine and impalpable that the officers of the *Dolphin* took them to be a mass of unctuous clay—may not, I say, these, with other specimens of soundings yet to be collected, be all converted by the microscope into tallies for the waters of the different parts of the sea, by which the channels, through which the circulation of the ocean is carried on, are to be revealed?

Suppose that the dwelling-places of the little shells which com-

pose this specimen from that part of the ocean be ascertained, by referring to living types, to be the Gulf of Mexico—and of that from this part of the ocean, the regions about Cape Horn—of another, the Arctic Ocean, &c. The *habitat* and burial-place, in every instance, we will suppose, are far removed from each other. By what agency, except through that of currents, can we suppose them to come from the place of their birth, and to be transported to that of their burial?

It is in vain to attempt to answer the *cui bono* in all the bearings of facts like these. Suffice it to say, they are physical facts; and in them, therefore, there is knowledge. They are facts which concern our planet, and touch the well-being or the rightly-knowing of its inhabitants; and, therefore, renewed attention to this subject of deep-sea soundings, and the specimens of the bottom that may be brought up, cannot fail to be regarded with increasing interest.

There is something peculiarly attractive and interesting about the mysteries of the sea. There is a longing desire to know more of them.

Man can never see, he can only touch, the bottom of the deep sea, and then only with the plummet. Whatever it brings up thence is, to the philosopher, matter of powerful interest; for by such information alone as he may gather from a most careful examination of such matter, the amount of human knowledge concerning nearly all that portion of our planet which is covered by the sea, must depend.

Every specimen of bottom from the deep sea is, therefore, to be regarded as a valuable contribution to the sources of human knowledge. And it is, in the judgment of right-minded men, a glorious privilege to have an opportunity of increasing the stock of human knowledge.

As it regards the subject before us, the officers of the American Navy are peculiarly favored.

They, especially, have the means and implements for sounding the ocean to its greatest depths, for collecting specimens from its bottom, as well as from its surface, and for trying its currents and its temperatures, both at and below the surface.

The means of doing this are not only placed at their disposal by an enlightened government, but it is by that government made their duty, as I am sure it will be their pleasure, to use them.

I hope soon to have this interesting department of the physical geography of the sea enriched, not only by specimens of bottom and soundings, but with various other materials and data collected by our ships afloat in the Indian and Pacific oceans, the China seas, and elsewhere.

I cannot find terms too strong to express my ideas as to the

sublime spectacle, which the world is about to afford, touching this united effort to investigate the laws which control the winds and currents of the sea.

The observations that are to be made for this purpose are to be placed beyond the casualties of war. When Capt. Cook was on his celebrated voyage of discovery, war broke out between France and England, and the French Government was asked, for the sake of his mission, not to molest him.

The reply of the French King was: "I war not against science;" and orders were given to officers of the French Navy, that if any of them should fall in with Capt. Cook, to recollect that he was the enemy of no man, but the friend of the human family; and they were commanded to treat him as such.

The Brussels Conference has recommended a like immunity for the observations that are to be made under this general system of co-operation, of vessels of all nations at sea, and the government of the United States has endorsed it.

By such a corps of observers—for, in addition to our own, the marine, both commercial and naval, of Holland, Prussia, Denmark, and Sweden; of Belgium, Bremen, Hamburg, Russia, Portugal, and Spain, of Chili, Brazil, and Great Britain, are enlisted, and are actually at work.

By the labors of such multitudes, all catechizing nature to the same point, and questioning the winds and the waves for their secrets, we may expect many an answer that will have a bearing for man's good, as to which we little dream.

I may be pardoned for illustrating this position by an incident of recent occurrence.

The national heart is yet grieving for the terrible calamity, and dreadful loss of life, which has recently occurred on board the steamer *San Francisco*, as she was bound hence to California, with seven or eight hundred souls on board.

She was reported to have been seen on the 25th and 26th of December, in a completely disabled condition. There was anxiety in the public mind, and a desire and readiness to send relief to those gallant men. But which way or where to send vessels and relief, who could tell?

I was called on. After consulting that chart* on the wall, on which the temperature of the surface-water of the ocean is shown for each month, I was surprised to find that the limits of the Gulf Stream for the month of January were what that chart shows them to be.

I discovered from this examination, that the *San Francisco*, when seen on the 25th and 26th of December, instead of being on the southern edge of the Gulf Stream, as was generally sup-

* Maury's Wind and Current Charts—Thermal Chart, North Atlantic Series.

posed, and as the common charts of navigation would seem to indicate, was actually north of the middle.

The diagram there is taken from a chart, on which, for the information of the Navy Department, I described the position of the Gulf Stream for January, and drew lines to show the direction in which the wreck had probably drifted, and the place where she would be most likely to be found.

Happily, before any of the vessels sent in search of her had sailed, the Kilby, the Three Bells, and the Antarctic, had fallen in with, and relieved her. But this was not known at the time, and the instructions which, by request of the Secretary of the Treasury, I gave to the Revenue Cutter from New-London, and which instructions were derived entirely from that chart, directed the vessel to pass so near the place where the San Francisco went down, that had the Cutter been in time, she would have been in sight of the steamer when she went down.

There has been recently commenced at the Observatory a chart, which it may be worth while to mention, as it bears upon the subject before us. It is what may be called a topographical chart of the sea. The object of it is, by means of the materials which are afforded by the large corps of observers, who are co-operating with me in researches concerning the phenomena of the sea, to show those parts of the ocean where icebergs are seen, where snow falls, where water-spouts rise, where drift wood is found, where sea-weed, flying-fish, &c., are seen.

Art. III.—PACIFIC RAILROAD—PLAN OF THE SOUTHERN CONVENTION.

THE following paper was prepared by Albert Pike, of Arkansas, as Chairman of this Committee, and is intended as a memoir to the several State Legislatures:—

It is not intended by the Committee, in this communication, to enter at large upon the consideration of the necessity to the South of a railroad to the Pacific Ocean; or of the probable pecuniary profits of such a road to the shareholders. We have reached a point (and so the action of the Convention indicates) when these matters may be taken for granted. They have become self-evident propositions, assuming which as true, we may proceed to the discussion of the *means* by which the desired object is to be effected.

Nevertheless, as the plan suggested by the Convention proposes an organization of the Southern and South-western States, and the nations on the frontier, identified with them in interest and institutions, there are some considerations in regard to the

necessity of this road to the slaveholding States, to which it is but proper that the Committee should very briefly allude.

Power has never dwelt long anywhere, without first being used and afterwards abused. The temptation to him who possesses it, to use and abuse it, is irresistible. The Northern States now have, and must always hereafter have, a continually increasing majority in both branches of the National Legislature. It is only by a perfect harmony and concert of action among themselves, that the Southern States can be enabled to maintain their just rights and their dignity in the Union.

The constitution forbids their forming any *political* league or compact among themselves. They can make no treaties with foreign powers, coin no money, emit no bills of credit, maintain no navy. Up to this time, each has been isolated from the other, with no alliances of any kind to knit them together and enable them to present a firm front against aggression.

To demonstrate to the Northern States that there are modes by which the Southern States can unite themselves together as one man, strictly within the Constitution, for a legitimate, peaceful and laudable purpose, calculated illimitably to increase their wealth, prosperity and power; that they can do this by becoming, as no one can deny they have the right to become, stockholders in a corporation chartered by one of themselves; by devoting to a great object their united means, and those of their citizens, and by finding a way to the trade of China and the Indies, over foreign soil, if need be, purchased and owned by the corporation,—would be worth to the South ten times the cost of a railroad from the Mississippi to the Pacific Ocean.

It would be not only illiberal and unjust, but absurd, to argue that a large proportion of the people of the Northern States is not sincerely and from patriotic considerations, attached to the Constitution and Union of the United States. But that feeling unfortunately does not gain strength as generation follows generation. The children do not revere the Union as their fathers did. And in the stream of foreign emigration, ever flowing, broad and deep, like a mighty oceanic current from the shores of Europe to those of America, and pouring into the open and inviting northwest, the most skillful analysis would detect scarcely a trace of veneration for the Constitution or love and affection for the Union.

We should be insane, to close our eyes to the important fact, that it is only by convincing the people of the North that union is profitable, and separation will involve disaster and loss to *them*,—that in that separation we should win and they would lose,—that we can hope for any length of time to maintain the union of these States.

If the South is powerful and united, then, holding the balance of power, and taking advantage of the divisions and dissensions which always agitate a majority, she will be secure, and her rights remain inviolate. The dream of an equal vote in the Senate is gone forever. It never was anything better than a dream.

It is everywhere seen and understood that the effects of a railroad to the Pacific, upon the commerce of the country, will be incalculable. Wherever *it* goes, political and commercial power will go as its inseparable companions. The commercial interests of the great cities, identical with those of not only the States in which they are situated, but of those adjoining, and even those at remote distances, on the great highways of trade leading to such cities, exercise a vast, steady and increasing influence upon the National Legislature. They make such legislation sectional in its character and consequences; they give shape and color to our foreign policy; they extend aid to works of internal improvement for the benefit of particular divisions of country, and give liberal gratuities to ocean steamships carrying the mails; they control in the acquisition of new territory and the creation of new States. For here, as elsewhere, "commerce is king."

The trade of the Pacific, the Indies and China, is the great stake now to be played for. Nations never played for one more magnificent. In that game, as in others, coolness, energy and sagacity will win. The Northern States and cities, always sagacious, resolute and energetic, and gifted with the faculty of *silence* withal, in what regards their commercial interests and their public and private prosperity; liberal with their own means, and having no constitutional scruples to prevent their pressing Federal legislation into their service, are pushing rapidly westward on Northern ground, the iron ribs that are to convey to the Northern Atlantic ports the commerce of the world.

Not content with the natural and regular growth towards manly stature of the great country lying in the North-west, they have resorted to the system of *forcing*, as men use hot-beds in horticulture; and we see new territories, of vast size, and comparatively unpeopled, organized and established on the line of a Northern Pacific Railroad,—Oregon and Washington standing on the shores of the Pacific, and Nebraska and Kansas on those of the Mississippi,—each clasping hands with the other on the slopes of the Rocky Mountains. It needs no prophetic eye to see in the future a cordon of free States carved in succession off from these Territories, extending with a continuous and swarming population across the continent, giving such power to the Northern vote in Congress as has hitherto been only dreamed of, and securing to *their* road, the Nile of this new Egypt, aid

from the National Treasury, and countenance and encouragement from the general government.

It will be well for the South to reflect whether, in the struggle for this great stake, she contends with the North on equal terms. What proportion of the foreign emigration will be brought within *her* borders, if the law passes that shall hire them with one hundred and sixty acres of land each, to settle on the public lands of the United States; when they are offered the additional compensation of a right to vote, if they will settle on the line of the Northern road?

It is too painfully evident that passion, rashness and folly will always endanger the continuance of the Union. That is an event on which a patriot ought most reluctantly to speculate. With the idea of disunion he ought never to become familiar. But it is at least *possible*, and the chances of it by no means diminish. To provide for all that is possible, though improbable, is the part of true wisdom; and he alone is entitled to be called a sagacious statesman, who is unprepared for *no* emergency, however remote. It is by precautions taken long in advance that we prevent the lightning from smiting our habitations.

It is therefore not improper for us to suggest, that, much as we need a Southern railroad to the Pacific now, while *in* the Union, we should need it infinitely more, it would be absolutely and literally indispensable, if the North and the South were to separate. Thus only could we maintain a foothold upon the Pacific coast. Thus only could we pretend to rival the North in the struggle for commercial pre-eminence. Offering the shortest, the most practicable and the cheapest route from the Pacific to the Atlantic, a Southern road would bind California to us with hooks of steel; and making separation an incalculable loss to the North, it would go far to render a dissolution of the Union impossible.

We are satisfied that the Pacific railroad neither can be nor ought to be built and owned by the general government. If it were, it would, in our opinion, be a great public calamity. The *legitimate* powers of that government are already quite large enough for the welfare and security of the Southern States. Add to them the patronage, the wealth, the influence, the power over the commerce of the country, which that road would give, and State sovereignty would be no more than a name.

And, whatever may be the true doctrine as to the constitutional power of Congress to build the road, as a military work or otherwise, it is at least certain that that power is, and always will be, denied by so large a number of our statesmen as to prevent its construction by appropriations from the Treasury of the United States.

Nor does it seem consistent with the public welfare that such

a work should be heedlessly given in perpetuity to any foreign company, alien in feeling to us, and in no way identified with our interests and institutions. Such an act could not but be followed by long ages of ever-increasing repentance and regret.

If it were practicable, the road should, in our opinion, be built by and belong to the States as partners. Then there would be no risk of abuse; and we should avoid the two great and equal dangers of governmental and corporation monopoly.

We are entirely satisfied that if the South wants the road, she may as well make up her mind that *she* has in some way or other to build it. We are more and more confirmed in the opinion that no substantial aid is to be looked for from the general government. Nor do we think that the respectability and dignity of the South is at all advanced by continually beseeching such aid. It was the opinion of the Convention, and we hope and trust it may come to be the settled opinion of the whole South, that two courses only are consistent with a proper, decent, manly self-respect: the one, to say that we *can* build the road ourselves, and with God's help we *will*; and the other, to say nothing about it whatever, and rest satisfied without the road, until it builds itself.

The plan proposed by the Convention, and developed by the draughts which are herewith presented, is for the Southern States, corporations and people to build this road themselves. It proposes to make the States interested as stockholders, as far as practicable, and the residue of the stock to be taken by cities, counties, the nations upon our frontier, corporations and individuals, in the South or elsewhere.

No reason is perceived why such a company cannot be formed under a charter granted by a Southern State. No reason is perceived why one hundred millions of dollars cannot be raised from the united wealth of the Southern States and people; nor why capitalists in the North and elsewhere should not be as willing to embark their capital in this great enterprise under *such* a charter, as under one granted by the Legislature of New-York.

It is not proposed to interfere with any company already chartered for the building of a road west of the Mississippi. Where they stop, this plan proposes to begin, unless they choose, of their own free will, to become a part of this company. It is not proposed in any way to thwart or injure the New-Orleans and Opelousas road, the Vicksburg and Shreveport road, the Memphis and Fulton road, the Cairo and Fulton road, or any other which points westward in the direction of El Paso. It is indeed hoped that interest will induce them to unite with the company to be formed under this plan; but that is for them alone to decide.

Texas offers a vast and valuable body of lands to any company that will build a road from a point not north of Fulton, to El Paso. It is hoped that she will not dispose of those lands, until the company to be formed under this plan is able to compete for them. Her interests as a Southern State will undoubtedly induce her to unite in this great scheme, with all the means she can command, and all the energy she possesses—for it is a measure of provision for the common defence and welfare of that South of which she is a part; whose interests are her interests, and whose fate must be her fate.

And moreover, any other company, taking her lands under her law, will be bound to build the road only to El Paso. She gives the lands in consideration of that alone. She will make a far better bargain if she gives them to a company which contracts to build it to the Pacific or Gulf of California. It is west of El Paso that the great difficulties on the route are to be encountered. From that point there are no lands of much value, but deserts and mountains only; and if a company, taking her lands, builds the road to El Paso, and there stops short, it may be almost said that the *Pacific Railroad* is as far from being built as ever.

The Committee entertain the most sanguine hopes that the plan here proposed will be carried into complete and successful operation; and that under it roads from New-Orleans by Opelousas, from Vicksburg by Shreveport, from Helena, Memphis and Cairo by Fulton, and from St. Louis through the Cherokee, Choctaw and Creek country, will unite and form one great trunk, connecting those several points with the Pacific ocean. Such a work as that the world never yet saw. Its influence upon the destinies of the South is incalculable. It can be built only by the united energies of the South, and it is worthy to tax those energies to their utmost.

As the Legislatures of the different States now appealed to, convene at different times between the first of October and the first of January, it is exceedingly desirable that the charter should be enacted so early in October that it may, if possible, be laid before the other Legislatures, as a law enacted and in force. This is particularly important, in order that such action may be obtained from the Legislatures of Arkansas and Texas, as will give the company an opportunity to compete for the lands granted in those States in aid of railroads.

The Legislature of the State of South Carolina is therefore most respectfully but very earnestly and urgently solicited to act at an early day of its approaching session on the draught entitled "A Bill to create and incorporate the Southern Pacific Railroad Company;" making such changes, additions and amendments, as to it in its wisdom shall seem proper; and the Legislatures of the other States and the Councils of the Cherokee,

Creek and Choctaw Nations, to act upon the draughts of bills to recognize the existence of the company, and to invest it with certain powers, immunities and privileges.

It is hoped that the States of Arkansas, Missouri, Texas and California, will make to the company such grants of lands as may to their Legislatures seem wise and proper; and that all of the States and the several Nations mentioned will take measures to become stockholders in the company to the utmost of their means and abilities, either by direct subscription, by some plan like that suggested in the draught, entitled "A Bill to provide for a subscription of stock in the Southern Pacific Railroad Company," or by some other plan by their wisdom and experience to be devised.

The undersigned refrain from further enlarging on this subject. They respectfully submit, in the language of the Convention, that it is the duty of every Southern man, to himself, to his children and his country, to engage earnestly in this great and indispensable measure of security, as well as of wealth, and of political and commercial power, to the South.

And they urge that the Southern States, in their corporate and sovereign capacities, are more especially called upon to enter with all their might upon this work. The question is now fairly presented, whether the Southern States *can* unite together to do a great work, to the performance of which they are invited by every consideration. Upon the verdict, to some extent, depends the world's respect. To fail, if no dishonor, will be to discourage and dishearten our own citizens, and invite renewed aggression, with which weakness never fails to be insulted. Every Southern State has the ability, if it will but believe it, to become a large stockholder in this company; and they and their people have ample means to build the road. It remains for the States to do their duty manfully. The prosperity and welfare of their cities and people require it. Their duty to the South as a whole requires it. Their own honor, and dignity, and self-respect demand it; and for it their people and the generations which are to come after us will thank and honor them.

ART. IV.—DONATION OF LANDS FOR RAILROAD PURPOSES.

WE shall not pause to argue the constitutionality of grants to railroad companies. They are but a mode of administration exclusively in Congress, as much so as that of surveying and mapping the lands, or of establishing offices for their record or disposition. All of these involve expenses which are for the benefit of the lands, and to create or increase the revenues from them. It

is practically to part with a portion of the lands, or their value, which is the same thing, for the benefit of the remainder. The case is identical with that of the railroad. Experience has proved that a certain amount of benefit is conferred upon lands by their vicinage to railroads, which is appreciable in market. Private individuals understand this so well, that, owning lands upon the route of a road, they will invest in its stock with no other prospect of dividends than in the enhancement of the value of their property, and there are instances of roads organized upon the principle of land subscriptions of individual proprietors. States understand this, as witness Texas in her late munificent grant to the Pacific Road.

Upon this principle, up to 30th June last, the federal government had donated 8,006,013 acres to railroad companies in the States of Illinois, Missouri, Alabama, Mississippi and Arkansas, of which more than half was to the two first named States. What has been the experience in these States in regard to the reserved sections? Was it not the means of bringing into demand lands long in the market without a purchaser? Have the increased value of the reserved sections not reimbursed the donation? We may turn to the report of the Commissioner of the Land Office for 1853 for the facts.

Thus has a market been created for lands which they could not otherwise have had, and thus has the government been enabled to derive a revenue in districts where there was previously none at all.

It is not easy to understand upon what principle of justice the government as a landed proprietor could stand by and derive upon its untaxed lands all the advantages which the enterprise of States and individuals can give to those lands, without parting with an equivalent.

It is not doubted that some of the roads which have been asking aid from government could be carried through without it. Notwithstanding this fact, the advantage to the government is none the less considerable; and although private individuals—speculators, if we please—are largely the gainers, the government loses nothing, and the public, while a greater price is exacted for the lands, have nothing to complain of, but prefer even this enhancement than to purchase lands at lower rates in other quarters. The increase in the population and wealth along the route of railroads compared with other parts of States will show this.

Congress have power under the Constitution to dispose of and make all needful rules respecting the territory of the United States. This power is either absolute or that of a trustee. If absolute, then it covers entirely the present case, and upon no other principle than that it has been held to be absolute through every administration, can the grants which have been made to

schools, colleges, seats of governments, roads, public buildings, private individuals, deaf and dumb asylums, etc., be sustained. If that of a trustee, then it is clearly a case of administration for the benefit of the lands, and it would only be necessary to prove a benefit to the extent of the donation to justify the grant. In either case it is a matter of expediency more than of constitutionality. Are these grants expedient? Do they increase the value of contiguous lands to an equal or greater extent than the value of the grant? or if the facts are not sufficient to demonstrate this, do they bring into demand lands which otherwise had proved to be unsaleable?

The majority of the roads which ask for these donations must be either entirely defeated or greatly delayed if they are disappointed, and thus the development of whole sections of country will be interrupted for the want of that action upon the part of government which it has been already seen neither injures the treasury nor violates the Constitution.

It will not do to say that the interests of trade will create through private revenues all the railroads which are really required, and the fact of any additional aid being required is a proof that the road is unnecessary. This is the argument of a late number of the *Railroad Journal*. It is met and refuted by the whole policy of the country. Our railroads have been built by the aid of cities, towns, counties, States, no less than by individuals. If dependent upon individuals, they could not have been built at all. They have created trade and travel rather than followed in their wake. They are carrying these further and further into the wilderness, rather than following them there.

It is very well for the *Railroad Journal*, speaking in behalf of the old States, where capital and labor are plentiful, and where railroad works are already completed, to say that the disposition to build railroads should be checked rather than encouraged by Congress, and that they should be left entirely to private enterprise.

The new States have neither capital nor labor in excess. It is for the interest of these States that population should be attracted and wealth increased. They ask no boon, but simply a right. They can benefit you while they benefit themselves, and only ask that they shall not be at the whole expense of incurring that benefit.

We know that the applications before Congress for grants are so numerous as to excite the apprehensions of many persons. That upwards of 100 were before the Committee of Public Lands, requiring, perhaps, 100,000,000 acres, to be satisfied. Many of these are the mere tricks of speculators. Some again are merely introduced for what is called *bunkum*, without any expectation or perhaps desire of passing them. Many are bona fide, substantial applications, based upon solemn charters, heavy

subscriptions by States and individuals. It will not be difficult for a Congressional Committee to separate these; and even if some mistakes are by chance made, better such than an indiscriminate refusal of all for the difficulty of selection. The charters of some roads have been obtained, subscriptions have been received, upon the assumed policy of the government to make such donations. A refusal to do this would greatly delay, if not entirely arrest the construction of these works.

All danger that the lands may be given away without the road being constructed can easily be obviated by restrictions and regulations in the grants.

With these brief remarks, which have been for some time upon our desk in manuscript, we introduce an interesting paper from the pen of Mr. Kettell, of the *United States Economist*.

WESTERN LANDS AND RAILROADS.

Indiana and Illinois are financially, in some respects, similarly situated. Both States commenced, in 1836-7, a system of internal improvements on credit; both partially completed them, and both failed, leaving large debts which they had no other means of paying than by taxation. Both were new countries, sparsely settled by persons whose only resources were the sales of their produce, and these, in the incomplete state of the works for which they were to be taxed, were not marketable. Taxation was felt to be impossible, and repudiation was inevitable in 1841. There were not a few persons who supposed that resumption would be impossible, on the ground that the arrearage interest would accumulate as fast as the means of even those fertile States. There were, however, public-spirited men who set about the work of redemption, and few States are now more prosperous. The area of the two States, the population, debts, and assessed valuations, are as follows:

	Indiana.		Illinois.	
	1840.		1840.	
Area	acres.	21,478,760		24,118,000
Population.....		683,866—1850. 988,416		476,183—1850. 851,470
Assessed Value.....		\$115,590,065—1853. 266,097,614		\$76,120,230—1853. 224,715,663
Debt.....		14,057,000—1853. 6,201,617		11,042,225—1853. 10,140,270

The two States together have increased from 1,162,049 inhabitants to 1,839,886, and the assessed value from \$191,710,295 to \$490,813,577, or from an average value of about \$190 per head to \$272 per head, while the debts have been mostly arranged so as to be in rapid process of settlement. In the case of Indiana, she had, in 1841, the unfinished Wabash and Erie Canal, designed to connect Lake Erie with the Ohio River. On this canal had been expended some \$3,000,000, and it possessed about 1,000,000 acres of land donated by Congress to aid in its completion. It was then proposed by Mr. Charles Butler, of New-York, that the holders of the unpaid bonds of the State

should advance, on security of the canal and its lands, \$800,000 to complete it, in the hands of trustees; that the State debt, amounting with the arrears of interest to \$16,254,592, should be divided by two; that holders of one-half should look to the canal and its lands *only* for their pay, and to meet the other half the State should levy a tax. This proposition was accepted, and the canal has been completed by the means pointed out, under the direction of Mr. Butler. The proposition was made in 1845, and the prosperity which Mr. Butler estimated as the probable result has been outrun by the facts. The assessed value of real estate has risen as follows:

	Assessed value.	Taxes.
1845	\$118,870,251	\$763,051
1853	266,097,614	1,620,943
Increase	\$147,227,353	\$857,892

By the funding operation the liabilities of the State for debt were reduced from \$743,000 annual interest on debt to \$310,000. That is to say, the annual tax of 1845 was hardly sufficient for the interest, and in 1853 it exceeds it by \$1,310,000. Yet, in proportion to the means of the people to pay, the taxes are now far lighter than then.

Illinois, in 1841, was possessed of her unfinished^a canal, running from Chicago 100 miles to the Illinois River. The canal owned 234,370 acres of land. This canal and land were placed in the hands of David Leavitt, Esq., as trustee for the bondholders, who loaned \$1,600,000 to complete the canal. That has been perfected, the lands sold, and the loan of \$1,600,000 reimbursed. The balance of the lands and tolls are now being applied to the payment of the canal bonds. With the progress of the canal to completion there have been constructed numerous railroads concentrating in Chicago. One of these, the Chicago and Galena Road, has been in operation some time through a country dependent upon it for transportation. The influence of that road upon the population and valuation of the counties through which it runs is conspicuous in the following compilation from official documents:

Trade of the Galena and Chicago Railroad.

Counties.	Population		Valuation.		
	1840.	1850.	1840.	1850.	1853.
Gov. Davis	6,180	18,767	\$383,715	\$2,785,225	\$4,294,573
Winnebago	4,609	11,737	222,630	1,564,617	3,000,339
Lake	2,634	15,134	95,385	1,222,088	1,955,651
Kane	6,551	16,242	289,565	1,442,001	3,247,846
Dupaye	3,535	9,290	196,290	943,503	2,104,145
Cook	10,201	43,280	1,864,205	7,617,102	22,929,637
Boone	1,705	7,627	55,990	717,192	1,492,255
Kendall	new.	7,730	1,205,732	1,767,135
Carroll	1,023	4,586
Ogle	3,479	10,020	175,555	971,230	2,201,612
Total	39,917	143,407	\$3,346,680	\$18,839,169	\$44,113,199

One year's interest on the enhanced valuation would build the railroad, which delivered from the farms it traverses, last year, a value of farm produce more than equal to its cost. The enhanced valuation on the track of that road has given \$140,000 per annum towards the payment of the State interest. The increase in the canal counties has been nearly as large, and the influence of the other railroads over the districts through which they run will be as great. The Galena and Chicago Railroad was projected at a cost of \$2,432,000, over a route on which the whole valuation in 1840 was \$3,346,680, and a population under 40,000. The results have been wonderful.

The Illinois Central branch, running south from Chicago to meet the main trunk at Centralia, which extends to Cairo, runs mainly through twenty-four counties, of which the present valuation, exclusive of Chicago, is \$41,647,204, or *three times* the cost of that portion of the road. The experience of the Galena road shows that as the population becomes more dense, the wealth has increased in a double ratio. That is, in round numbers, 40,000 persons in 1840 owned an average of \$80 each; in 1854 143,000 persons owned rather more than \$130 each. The numbers increased 250 per cent., and the wealth of each increased 62½ per cent. The same results on the line of the Central road, within five years, carry the valuation of those counties to \$120,000,000.

It is to be borne in mind that a great portion of this immense prosperity has been derived directly from the proper application of the lands of the federal government. By their aid alone did Indiana and Illinois, during the dark days of their finances, procure as much money as would complete their canals. The expenditure of that money developed a local prosperity on which the railroad impulse was based. The attraction of settlers, who brought lands within the tax list, aided the States in resuming payments. It was a far more direct mode of restoring national honor than by assuming the debts, because the States now pay their own debts.

The pretended donation of land to the State of Illinois, in aid of the Central road, amounts to this, and no more: On the tract of that road the Government had 12,500,000 acres, which it had tried during fifteen years in vain to sell. It was most fertile land, but worthless to the settler, because inaccessible to market. The Government gave away one-fourth in order to make the other three-fourths more valuable than its best lands. The Central road undertook it, and has *paid the government* \$800,000 duties on 70,000 tons of iron; a sum more than equal to the whole value of the land; and the government, in addition, gets \$6,000,000 for the remainder of its land more than the *minimum* price. Thus, for 2,500,000 acres of land, which it before could

not sell at all, it gets \$6,800,000 cash, or \$2,50 per acre, and calls it "a gift." There is not a land-holder in the country but would like to make just such "gifts" of his property.

If now we suppose that the lands had been given to settlers, as proposed under the new land bill, and fools enough had been found to go on to the inaccessible lands, when would the road ever have been built, or the lands ever have repaid the labor of breaking them up? Most undoubtedly the great national interests require that one portion of the land should be applied to the improvement of that held by settlers, through the construction of public works.

Art. V.—THE NEW-ORLEANS ACADEMY OF SCIENCES.

WE have just received the first volume of the *Transactions* of this flourishing institution, embracing a number of highly interesting and valuable papers on various branches of science. The volume is an earnest of the success and future prospects of the institution, which already includes among its Fellows the most distinguished scientific and literary men of the South.

Among the papers published in these *Transactions*, we notice the following:—*On Indian Antiquities*, by Prof. E. Everett, President of Orleans College, La. *On Roman Coinage*, by Prof. Chilton, of the Louisiana University. *On the Mineral Waters of Louisiana, Mississippi, and Arkansas*, by Dr. W. P. Riddell. *On Allotropic Phosphorus*, by Dr. Crawcour, of New-Orleans; also contributions on various subjects, too numerous to mention, by Prof. Riddell, of the University of Louisiana, Prof. Forshay, Maj. Blanchard, Rev. Dr. Campbell, Dr. Copes, Dr. Benedict, the Permanent Secretary, and other members.

The New-Orleans Academy of Sciences owes its existence to the exertions and love of science of a few scientific gentlemen of New-Orleans, whose names appear in the *Transactions*. The first President of the Academy was Dr. JOSIAH HALE, of New-Orleans. Its present President is Dr. E. H. BARTON, of New-Orleans. The present number of Fellows is about fifty. The Academy embraces all branches of science, and is divided into eleven sections. The following are the sections, with the present Chairmen and Committees of each:—

- 1st.—Natural History of Animals.—Chairman, Dr. Smith. Committee, Lindsay, Crawcour, Dowler.
- 2d.—Botany.—Chairman, Dr. Hale. Committee, J. L. Riddell, Bolton, Blanchard.
- 3d.—Geology.—Chairman, Prof. Chilton. Committee, Hale, Copes, Mitchell, W. P. Riddell, Henderson, Simonds, Blanchard.
- 4th.—Chemistry and Natural Philosophy.—Chairman, Professor Riddell.

Committee, Macgibbon, W. P. Riddell, Copes, Crawcour, T. C. Copes, Mac Nair and Corry.

5th.—Astronomy and Mathematics.—Chairman, Maj. Blanchard. Committee, J. L. Riddell, Campbell, Scott, Simonds, Mac Nair.

6th.—Antiquarian Researches and Ethnology.—Chairman, Dr. Dowler. Committee, Crawcour, Parmele, Benedict, Scott, Henderson.

7th.—History, Biography and Philology.—Chairman, Mr. Parmele. Committee, Hughes, Gordon, Mitchell, Campbell, Scott, Henderson.

8th.—Medicine.—Chairman, Dr. Crawcour. Committee, Macgibbon, Lindsay, Barton, Dowler, Smith.

9th.—Geography, Statistics and Political Economy.—Chairman, Dr. Barton. Committee, Lindsay, Blanchard, Chilton, Gordon, Everett.

10th.—Psychology and Esthetics.—Chairman, Dr. Campbell. Committee, Hughes, Blanchard, Benedict, Lindsay.

11th.—Agriculture. Chairman, Dr. Lindsay. Committee, W. P. Riddell, Baldwin.

The New-Orleans Academy of Sciences bids fair to become one of the most important institutions of the kind in this country. It is the most southern of any on the globe, and in a section of this continent which affords a wide and but partially explored field for scientific research. The South needs such an institution, as a nucleus about which its numerous scientific men may cluster, and make known the results of their labors. There is no city in the Union, of its size, containing a greater number of scientific men than New-Orleans; and no other city affording greater facilities for scientific research. The characteristic liberality of the South, and especially that of Louisiana, will encourage this rising institution, and nothing will be wanting—with a continuance of the present zeal and industry of its members—to insure its complete success, and to rank it among the first of the scientific institutions of the day.

Art. VI.—SOUTHWESTERN CITIES.

1. MEMPHIS.—In 1850 there were 5026 persons born in the United States, and 1401 foreign born, white and free colored, residing in Memphis. Of the foreigners, 704 were Irish, 341 Germans, 69 French. Of the natives, less than one-half were born in the City or State. By a census the present year there were in Memphis 9670 whites, 2858 slaves, 159 free colored; total, 12,687. The value of taxable property has thus progressed:

1851.....	84,978,000
1853.....	6,377,000
1854-5.....	8,266,500

The receipts of cotton for the last two years average 200,000 bales each. A report to the Common Council states:

I now lay before you my report of the City Census, showing total population 12,687, within the city limits, being an increase of 25 per cent. in the last year. According to an estimate made by me, the population in the immediate suburbs of the city is 2,960. Doubtless it exceeds 3,000, giving us a permanent population of at least 16,000. If to this be added that large class of persons who, though not properly citizens, are engaged in business pursuits and avocations here during every winter, it will be seen that the population of Memphis reaches an amount equal to that claimed by its most sanguine friends. Persons unacquainted with the facts may be disposed to sneer at this estimate of those without the city limits, as an attempt to over estimate our population. All who are acquainted with the facts are well aware that the proportion of this class is larger with us than in any city of the southwest, embracing as it does a large proportion of our business men. If there had been any disposition to misrepresent the facts, it is evident this class would have been included in the estimate, without stating that they were not within the present city limits; and the census would have been taken in the winter, when every one knows our population is much larger than in the summer. Some of our citizens strongly object to the census being taken in the summer; but it must be admitted that if the object is to obtain the amount of permanent population, it can be much more correctly arrived at then than in the winter. Two causes have tended to produce this disposition to spread without the city bounds—the beauty and adaptedness of the country in the immediate vicinity for resident purposes, and the somewhat high rate of taxes it is found necessary to impose, in order to carry on those improvements required by our rapidly growing city. Hitherto there have been no counteracting causes to prevent this; but not to mention others, there is now one in active operation which will have a strong influence to confine our citizens within more narrow bounds. I refer to our public schools. The experience of the last year has already demonstrated that they have now reached a state of excellence far surpassing the usual character of our private schools, producing results which could not have been expected from them in so short a time, even by their most enthusiastic friends.

For these results we are mainly indebted to our worthy President of the Board of Public Schools, Dr. A. P. Merrill, assisted by an excellent superintendent and accomplished teachers. Since his residence here he has devoted nearly the whole of his time and talents to the building up of our public schools, gratuitously at that, with an amount of ability and perseverance seldom equalled, as is clearly shown by the state of perfection and excellence which they have already attained.

A word here with reference to our manufactories may not be uninteresting. Not to be too prolix, suffice it to say that we have three extensive foundries, machine shops and boiler yards, establishments for the manufacture of railroad cars, ploughs, wagons, carts, wheel-barrow, carriages, cotton gins, horse mills, sash, doors and blinds, and every description of wood work, soap, candles and lard oil, furniture, saddlery and harness, hats, watches and jewelry, an extensive cotton mill, planing mill and flouring mills, each and all turning out an amount of work much larger than is generally supposed, and of a quality much superior to that generally brought from abroad. All these establishments have sprung up within a few years, and though laboring under disadvantages incidental to every new enterprise, the experience of the last year has clearly demonstrated that they are not only advantageous to our city, but also conducive to the wealth and prosperity of their respective owners.

The superior advantages of Memphis for a boat yard, for the construction, and a dock for the repair of steamboats, cannot longer be overlooked. Doubtless we shall soon have an establishment of this kind; and though the

pioneers in such an enterprise will have some difficulties to encounter, yet a very short time will demonstrate (as in the case of the others) that such an establishment will be not only conducive to the prosperity of Memphis, but also to the wealth of whoever may have the boldness to engage in such a work.

At the same ratio of increase as has taken place during the past year, in five years Memphis would have a population of 50,000. Who can doubt but that the rate of increase will be even greater? Memphis is but just awakening to a sense of her superior advantages. We have now four extensive and important lines of railroad in course of construction, having ample means secured for their speedy completion. A few years will clearly demonstrate that her future is even more bright and glorious than is claimed by her most enthusiastic citizens.

VICKSBURG, MISS.

Statement of Cotton delivered at Vicksburg, by the Vicksburg and Jackson Railroad, for each year ending September 1.

MONTHS.	1847.	1848.	1849.	1850.	1851.	1852.	1853.	1854.
September.....	1,602	2,315	5,658	1,143	2,079	4,711	8,224	2,316
October.....	5,996	7,261	10,881	4,895	11,811	12,665	20,316	10,610
November.....	8,456	7,717	9,238	5,369	12,896	10,957	22,273	17,802
December.....	7,358	6,609	8,470	5,313	9,672	17,215	14,704	20,706
January.....	4,995	10,673	7,013	3,329	10,710	9,832	14,084	13,915
February.....	3,310	7,973	7,622	4,463	2,554	6,754	9,131	8,837
March.....	1,102	5,179	6,822	2,439	878	4,479	4,276	5,751
April.....	1,302	2,030	2,229	1,362	1,653	1,791	2,493	3,956
May.....	470	577	1,015	1,200	2,191	1,076	1,241	1,556
June.....	151	481	235	205	874	272	581	595
July.....	21	325	322	95	210	246	307	784
August.....	138	657	177	65	352	525	252	1,350
Total.....	34,901	51,797	59,682	29,878	55,880	70,523	97,868	88,378

Amount of Cotton received at Vicksburg, by Railroad, and Amount from each Depot—Year ending 1st September.

DEPOTS.	1851.	1852.	1853.	1854.
Braddon.....	7,561	7,856	12,445	12,336
Jackson.....	8,297	9,382	14,518	10,370
Bailey's, Jackson.....	13,345	15,194	26,469	21,908
Clinton.....	10,233	11,961	16,117	15,681
Bolton's.....	5,030	6,396	6,636	5,872
Raymond.....	1,117	4,729	6,995	5,530
Edward's.....	8,176	11,259	11,273	10,572
Way Stations.....	2,121	3,746	3,415	6,109
Total.....	55,880	70,523	97,868	88,378

Art. VII.—THE VIRGINIA STATE FAIR.

In our next issue we hope to be able to present a sketch of the Agricultural Fair which is now attracting such crowds of Virginians to their beautiful Capitol. Such indications of progress at the South are cheering. Already have we the annual exhi-

bition in Georgia, the South Carolina Agricultural and Mechanics' Institute, with its fine building in progress at Charleston, the Southern Agricultural Convention, meeting alternately in each of the States, and next in order at Raleigh, North Carolina, even Louisiana has woke up again and re-established her State Society.

The following is extracted from the report of the Virginia Executive Committee:

The Executive Committee cannot, in justice to the city of Richmond, omit to state that by her council and citizens individually, she has contributed to the society in land and money the sum of \$54,000, or even more than that by several thousand, if we take into view the enhanced value of the beautiful lot which she has placed at our disposal as long as we choose to occupy it, and farther, to say that the skill and taste of one of her most useful citizens (Mr. T. T. Giles) have adorned the grounds and fitted them for our use and reception as no other grounds in the Union are fitted up. It is to be hoped that this liberality to an institution whose benefits are but secondary to her, will not be without its influence on those whose direct interest it is to foster and promote it.

The Executive Committee are fully conscious that for the want of adequate means they have been unable to carry out many important measures which, in the ardor of their zeal, they had fondly hoped to accomplish. Yet, so far from being discouraged, they cannot, on reviewing the brief history of this society, repress a feeling of gratification at the eminent success of their labors.

It is believed that the records of no similar institution in the world, exhibit an instance of success at once so speedy, complete and brilliant. Less than three years ago, when all former efforts to establish a State Agricultural Society had signally failed, on a dark and gloomy winter's evening, a small band of determined patriots, numbering little more than one hundred, still hopeful, and undismayed, assembled at the capital of their State, to make a last effort to rouse the dormant energies of Virginia, and to establish a society that should be worthy of the intelligence of her farmers, and the ancient renown of this noble Commonwealth. The meeting was continued from day to day, a constitution adopted, officers elected, and the society put in successful operation. Its members and resources rapidly increased. New zeal was infused into the Agricultural community, and aided by the magnificent liberality of the city of Richmond, we were enabled before the close of the second year of its existence, to hold the first annual exhibition of the society—an exhibition which, in taste and magnificence, has scarcely been equalled in any part of the world, and which not only gratified our State pride, and interested our own people, but attracted the attention of the whole Union to the vast undeveloped resources of the Commonwealth, and called forth the admiration of the enlightened strangers from all quarters, at the moral, physical, and intellectual sublimity of the spectacle. The farmers of the State and the citizens of Richmond seemed to catch inspiration from the scene, and promptly contributed from their own means a sum sufficient to place the society on a permanent footing.

Since that memorable meeting, the effects of which on the fortunes of the State none can estimate, much practical information has been diffused through the instrumentality of the society; new zeal for improvement had been awakened; and, notwithstanding a partial failure of the crops of the State, through Providential visitations, the resources of our people are considerably increased; emigration has ceased, and immigration has commenced; the price of lands has rapidly advanced, our schools and colleges

are crowded to overflowing; so that it may probably be said with truth that Virginia has now, in proportion to population, more youths in a course of thorough education than any other State in the Union. Over these beneficent results, in part at least to be attributed to the success of our society, we have just cause to rejoice. The close of another year finds us on the eve of a still grander exhibition. With our grounds greatly enlarged and improved, a most liberal premium list, zealous preparations for an extensive exhibition, and a vast throng of our enlightened farmers in attendance from every part of the Commonwealth, numbering thousands beyond those present on the former occasion, we have every reason to expect a most brilliant and attractive spectacle. With these cheering evidences in the past, how can we doubt our future success? Let the farmers of Virginia come up to the annual exhibition with their votive offerings, forgetting all local and party distinctions, remembering that they have a common home and a common destiny, and cordially and harmoniously co-operating in our glorious cause, and the beneficent effects of our labors will descend to distant generations, and our latest posterity will have cause to bless the day that inaugurated the Virginia State Agricultural Society.

ART. VIII.—PESTILENCE AT THE SOUTH.

At the opening of another wintry season, how many hearts will be lightened in the prospect of returning healthfulness throughout the stricken regions of the South! How many homes have been visited with sorrows—how many hearths have been made desolate, by the pestilence which has so long and so cruelly indulged undisputed sway! Alas, the memory of scenes that have been witnessed will linger long among us!

Confined no longer to its accustomed haunts, yellow fever, that scourge of the tropics, has found new fields for the exercise of its deadly power. It has swept up from the sea-coast into the interior, and desolated rural provinces far removed even from navigable streams. Surely this is some other enemy introduced among us, and not that ancient one with which we were accustomed to combat. Never before have such phenomena presented themselves. Never has it seemed that all classes and all places were to be swept alike within the vortex of the destroyer.

It is even so. The admonition is too strong to be disregarded. The pestilence that has come in upon us has no abiding place. It passes hither and thither. Now in New-Orleans, in the summer of '53 it appears in Mobile, and almost simultaneously makes havoc throughout Louisiana, and far into the hearts of Alabama and Mississippi. Another summer, and Charleston, Augusta, Montgomery, Beaufort, are sorely and sadly visited, and Savannah is devoured by a plague which has scarcely any parallel. Yet another summer, and who shall say that Wilmington and Raleigh, Richmond and Washington, Baltimore, New-York, and even Boston, may not constitute footstools in the march of this colossus of desolation? Science al-

ready proclaims it. The past is not without its precedents. No section can expect immunity. Let us be vigilant, yet manful, in the prospect. The coward dies every day—the brave but once." There is a providence protecting those who do their duty in every crisis, like that which carried the Hebrew youth through the fiery furnace.

Dr. Barton, from some statistics furnished him by the Census Office, with the aid of local reports, was enabled to form the following table, showing the proportion in which persons in New-Orleans of different nativities were subjects of Yellow Fever in the summer of 1853, which may be considered a type for every season :—

COST OF ACCLIMATION,

Showing the Life Cost of Acclimation; or Liabilities to Yellow Fever from Nativity, as exhibited by the Epidemic of 1853, in New-Orleans.

NATIVITIES—STATE AND COUNTRY.		Popula- tion in 1850.	Estimated popula- tion in 1853.	Esti- mated mortality from Yellow Fever.	Ratio per 1000 of the popu- lation.
	{ New-Orleans.....	38,337..	46,001..	{ 140 25..	3.56
	{ State of Louisiana.....				
Southern States.	{ Arkansas, Mississippi, Alabama.....	2,655..	3,176..	42..	13.22
Northern Slave States.	{ North Carolina, Virginia, Maryland.....	4,160..	4,984..	153..	30.60
	{ Tennessee, Kentucky.....				
Northern States.	{ New-York, Vermont, Massachusetts.....	8,806..	10,751..	353..	32.83
	{ Maine, Rhode Island, Connecticut.....				
N. Western States.	{ New-Jersey, Pennsylvania, Delaware.....	1,693..	2,030..	92..	44.23
	{ Ohio, Indiana, Illinois.....				
	{ Missouri.....				
	{ British America.....	318..	381..	20..	50.34
			66,945..	825..	13.32
	{ West Indies.....				
	{ South America.....	1,693..	1,700..	11..	6.14
	{ Mexico.....				
	{ Great Britain.....	3,832..	4,598..	240..	52.19
	{ Ireland.....	22,093..	26,611..	3,569..	296.97
Northern Europe.	{ Denmark.....				
	{ Sweden.....	491..	588..	60..	103.26
	{ Russia.....				
Middle Europe.	{ Prussia.....	14,765..	17,718..	2,339..	132.01
	{ Germany.....				
L. W. Western Europe.	{ Holland.....	127..	132..	50..	328.04
	{ Belgium.....				
Mountainous Europe.	{ Austria.....	7663..	797..	176..	220.06
	{ Switzerland.....				
	{ France.....	8,306..	9,967..	486..	48.13
Southern Europe.	{ Spain.....	1,848..	2,317..	61..	22.06
	{ Italy.....				
		109,679	62,648..	7,011	111.91

Thus, of citizens of Louisiana, but 3 in 1,000 died, (it was impossible to separate the population of the City and State, of those born in the South, 13 in 1,000;) in the Northern States,

32; North West, 44; Ireland, 204; Holland and Belgium, 328. Dr. Barton estimates the population of New-Orleans during the season at 125,000, as he cannot find that more than 36,000 had left. The deaths by yellow fever were 8,101, or 1 in about 15. The unacclimated portion of the population he estimates at 60,000, of whom one-seventh would then have died. The total mortality during the year in New-Orleans, from all diseases, 1 in 10.23. The total number of cases of yellow fever was 29,020, of which the deaths were nearly 28 per cent. This is the largest number of cases and the greatest mortality from yellow fever that ever afflicted our city. But it is the least mortality to the number of cases that has ever occurred in a great and malignant epidemic.

Art. IX.—THE SLAVE TRADE—CALIFORNIA.

DRIVEN by the fanaticism of the North, the subject of the Slave trade has again been opened by some of the Southern presses, and it is argued that much has been lost and little gained by its abolition. It is very certain that but for the cheerful acquiescence of the South, this trade could have been prosecuted as successfully as it has been in Cuba and in South America of later years. Between 1840 and 1847 249,800 Africans were taken into Brazil, and 52,000 into the Spanish Colonies. The annual number exported from Africa is supposed, even now, to average 70 to 80,000. The whole number of Africans imported altogether into the United States is estimated, by Mr. Carey of Philadelphia, on reliable data, at 333,000. This number, under the wholesome system of slavery, has swelled to over 3,000,000, whilst of the 1,700,000 which were imported into the British West Indies, after nearly two centuries, but 660,000 remained to be emancipated. The *Charleston Mercury* asks:

Is it not time to look at this matter as involving questions which, stretching beyond the narrow vision of dreamers, demand for their solution calm inquiry and sober discussion? Does not the Slave Trade, in supplying to many flourishing States the labor needful for their development, in abundantly furnishing to the world the most useful products of human labor, in bringing the savage within the pale of civilization and Christianity, and lastly, by still progressing in its work, in defiance of all attempts at its suppression, by all these titles, rightfully claim for itself an origin higher than mere avarice, and a recognition at the hands of Government other than is accorded to the buccaneer and pirate? We desire to see this question taken out of the hands of empty-headed fanatics, who have all along usurped its control, and when this is done, we confidently expect to see the Slave Trade classed among those mysteries which, however repulsive to fastidious eyes, are yet, in the hands of God, the instruments of man's progress.

The *Richmond Enquirer* finds reason to predict another slave State in California :

Happily, the result of the recent elections is not altogether disastrous to the South. Even from the gloom of defeat in the North, comes a ray of hope that the insolent triumph of the abolitionists may stimulate the zeal of the apathetic and rouse the resentment of the submissive, so that men of all parties and of every disposition in the South may perceive the necessity of united and energetic action in defence of their rights.

Besides this general effect, there is a significance in the result of the California elections which the South observes with satisfaction, and with a presage of good fortune. In addition to the ordinary political issues, parties in California are distinguished by diverse and conflicting views of slavery. The Democratic party is split into two factions, one of which professes the fashionable free-soil notions of slavery and of its evil influence on the welfare of society ; while the other understands its true nature, and proposes to introduce and establish it in the State. The struggle between these parties has been fierce and arduous, and it was long doubtful for whom victory would pronounce. But the vulgar energy of a brutal *rowdyism* was unequal to the contest with talent and character, and we witness, at last, the complete triumph of the "Chivalry."

The unseen but active issue between these factions is, whether the southern portion of California shall be organized into a separate State, with a constitution recognizing and establishing slavery. The recent success promises a satisfactory solution of this problem. And thus may the military violence by which California was devoted to free-soil be avenged, and the South be yet restored to an equal participation in the wealth of that splendid empire. For, if the people of California choose to divide their domain, and to set up another State with Southern institutions, of course Congress will not presume to interpose any objection. Southern California is peculiarly propitious to negro labor, and its inhabitants are very anxious that slavery should be introduced amongst them.

Art. X.—COMMERCE OF NEW-ORLEANS.

[In our last number appeared the aggregate results of the commerce of New-Orleans, for the last three years.

To these statistics we now append a part of the detailed report published by the *New-Orleans Prices Current*, and will furnish the rest of it in our next number. For the reports of previous years, the reader will refer to other volumes of the REVIEW. The results of New-Orleans commerce have an immediate and practical value with the planting interests of at least a dozen States, and no apology can be needed for the space which they occupy in our pages.]

COTTON AND SUGAR.

As a general observation, it may be remarked that the past season has been a period of unusual fluctuations in our leading commodities, the long apprehension and uncertainty of a formidable European war, and the final resort to arms, having powerfully influenced the course of many of our most prominent articles of export and consumption. Thus cotton and tobacco, with a highly favorable combination of circumstances merely commercial, have been adversely influenced by the disturbing forces of political agitation and belligerent movements, while the same causes have produced an

unwonted demand for breadstuffs, and to some extent pork, lard, &c., for European export, with a speculative enhancement of prices, and the usually attendant fluctuations. As affecting the whole, however, and bearing heavily upon all articles taken for transportation to other markets, we feel called upon to notice the lack of adequate shipping facilities, and the consequent unusually high rates of freight. This difficulty has been so formidable that at several periods during the season operations in our leading staples have been absolutely suspended, from the impossibility of effecting immediate shipments, *at any rate*. We trust that the munificent profits which have been garnered by the navigation interest will prove an incentive to the construction of a more ample supply of tonnage for the coming season, when we hope to have such abundant crops as will furnish full and profitable employment to such a fleet of noble ships as even New-Orleans, prominent as she has long been among the sea-ports of the world, has never before witnessed. That abundant crops will be the reward of the labors of the planter and the farmer there seems now to be a fair prospect, and we sincerely hope that their products will meet with a favorable market, though a state of war such as now exists, and which is likely to become still further complicated, is a condition of things not at all favorable to the stability of commercial calculations.

The railroad enterprises, to which we made reference in our last annual review, may be said to have made fair progress, considering the nature of the country traversed and incidental obstacles which could not well be foreseen; and we sincerely hope that before the lapse of another year such further advances will be made, and such results presented, as will furnish substantial and marked evidence of the advantages of these artificial connections with the interior.

The value of products received from the interior since 1st September, 1853, is \$115,336,798, against \$134,233,735 last year; showing a decrease of \$18,896,937, which is mainly attributable to the reduced crops of cotton and tobacco. According to the Custom-House records, the total value of the exports from this port, for the year ended 30th June last, was \$83,926,728, against \$98,988,186 the year previous, or a decrease of \$15,061,458. Of the above amount \$83,651,383 was American produce, of which \$60,656,785 was exported foreign, and \$22,994,598 was shipped to coastwise ports. Of foreign merchandise the value exported was only \$275,345.

The operations of the Branch Mint at this place, which had rapidly fallen off since 1851, show an increase as compared with last year, the total receipts of gold and silver for the year ended July 31st, 1854, being \$5,624,708, against \$4,485,865 the year previous—increase \$1,138,842. The coinage during same time has been, of gold \$1,720,000, of silver \$2,892,000—total \$4,612,000, against \$2,857,000 last year—increase \$1,755,000.

Cotton.—Another season in the cotton market having been brought to a close, and a new one entered upon, we take occasion to present our usual review of the past year's operations in this leading article of our country's commerce; a year, by the way, that has been marked by more fluctuations, obstructions and irregularities in the disposal of the cotton crop, than any previous one that has fallen under our review for some years past.

The first bale of the *new crop* did not reach market until the 9th August, and up to the 1st September only 74 bales had been received, against 5,077 bales to same date the year previous; a marked deficiency, which continued to be shown in the progress of the season, until in the early part of March the receipts at this point, as compared with the year previous, showed a falling off of 440,000 bales, while the deficiency in the arrivals at all the ports was upwards of 640,000 bales. Besides the backwardness of the crop, which was retarded in its progress to maturity by unseasonable rains, the

prevalence of the yellow fever in the city, and in nearly all the river towns, interposed obstacles to the forwarding of the crop to market, and it was not until the latter part of September that any considerable sales of the new crop were made, the range of prices at that period being 10 to 10½ cents for low middling, 10½ to 10¾ for middling, and 11 to 11½ for good middling. In October the market presented great heaviness and irregularity, and prices rapidly gave way, under the adverse influence of unfavorable European accounts, advancing freights, declining exchanges, and an inadequate demand, the quotations at the close of the month being 8¼, 8¾, and 9½ cents for low middling, middling and good middling. The total sales up to this time had barely reached 56,000 bales, against receipts of 118,000 bales. Towards the close of November, however, the market rallied again, under the influence of an improved demand, which was instigated by more favorable advices from Europe, and by accounts of frost through a large portion of the cotton region, which, together with other and previous adverse circumstances, it was calculated would materially reduce the crop in quantity, besides injuring it in quality. Under this improved demand prices at the close of November reached 8¼ to 8½ cents for low middling, 9¼ to 9½ cents for middling, and 10 to 10½ cents for good middling. In December, and during the greater part of January, business to a fair extent was transacted, and the operations would doubtless have been still more extensive had the market been better supplied with lists of even-running middling to strict middling, upon which line the demand for all markets seemed to run more exclusively than we have ever before known, while probably no previous crop, at least up to that time, was so ill calculated to meet such a demand, the receipts having been of a remarkably low average, so low indeed that for a long time in the early part of the season, and at a period when it is usual for the receipts to present a high average of quality, a large proportion of the arrivals ranged below middling, and for many weeks these low qualities were wholly unsaleable and without a market price; and thus the difference in price between the lower and higher grades, and between mixed and even-running lists, has taken a wider range the past season than in any previous one within our recollection. At this period, however, the receipts were presenting a better average, as the attention of planters had been repeatedly and earnestly called to the necessity of improving the quality of their crops by more care in "handling," while the upland crops, which in many sections were rather better than usual, were coming in more freely. With respect to prices in the month of December and January, they were for the most part tolerably steady for the qualities in demand, but February was entered upon at a decline, which was mainly produced by a severe money pressure, the difficulty of negotiating exchange and an advance in freights; though unfavorable foreign advices subsequently aided the depression, and the quotations from about the middle of the month to the close were 8 to 8¼ cents for low middling, 8½ to 8¾ for middling, and 9 to 9¼ for good middling. In the early part of March the demand became more active again, and by the middle of the month prices had advanced ¾ cent, the quotations being for low middling 8¾ to 9, middling 9¼ to 9½, good middling 9¾ to 10 cents per pound. At this juncture the prices again gave way, under pressure of the unfavorable aspect of European affairs, and unusually high rates of freight, and with various fluctuations, taking an extreme range of 1¾ cent per pound, the lowest point of the market was reached in the latter part of May, when the quotations were for low middling 6¾ to 7, middling 7¼ to 7½, good middling 8¼ to 8½ cents per pound. At this period the quotation for freight of cotton to Liverpool was 15-16 to 1d. per pound, with little or no room immediately available, even at these high rates, and the operations of pur-

chasers were checked by the impossibility of effecting prompt shipments, while at the same time a large stock had accumulated in the hands of exporters, who had bought from time to time, and held their purchases in store, in the hope of shipping on more favorable terms. Prices rallied again in the latter part of May and during June, and there were some sales in July which showed a recovery of $1\frac{1}{2}$ cent from the lowest point, the stock on sale being much reduced, the advices from abroad rather more favorable, and freight to Liverpool down to 11-16. In August the transactions were comparatively unimportant, and thus closed a season which, we suppose, has proved little satisfactory to any of the parties interested (except the freighter), the perplexities and uncertainties growing out of the European war question having led to fluctuations that baffled all commercial calculations. We think it may be safely remarked, however, that considering all the adverse circumstances which have been brought to bear upon it, the market on the whole, and in the general average, has been even better sustained than could well have been anticipated, and the course of the season has, we think, afforded ample evidence that but for the disturbing causes alluded to a range of prices much above the average of last year would have been attained.

The crop, in quality, as we have already intimated, was of a rather low average, resulting partly from unseasonable rains, and partly from frost damage, but mainly from careless and hasty picking, which looked more to quantity than to quality, and thus the proportion of the finer grades has been unusually small, while the lower qualities have been abundant. We would here remark, however, that the demand for the finer descriptions has been much less than usual, owing mainly, as we suppose, to the almost entire suspension of the demand for the markets of Russia, and during the greater part of the season we were unable to give quotations for qualities above middling fair, owing to the absence of any transactions of sufficient moment to establish market rates. The proportion of frost-stained cotton has been greater than ever before, and factors have found much difficulty in disposing of it, as most orders wholly prohibited its purchase. It is to be hoped that the coming crop will escape this damage, and that the experience of the past season has been sufficiently admonitory to planters to induce them to seek their own advantage by "handling" their crops with more care.

The following tables, which show the monthly fluctuations in prices, with the rates of freight to Liverpool, and of Sterling Exchange, will indicate the course of the market through the entire season, and by reference to them it will be seen that the extreme fluctuation in middling cotton has been $3\frac{3}{4}$ cents per pound, the highest point being in September and the lowest in May, and that the average price of the season, including all qualities, has been $8\frac{1}{2}$ cents per pound, against 9 cents last year and 8 cents the year previous. The average weight of the bales we have ascertained to be 448 pounds, against 455 pounds last year and 438 the year previous, and the aggregate weight of the portion of the crop received at this port is 645,468,992 pounds.

Table showing the Quotations for Low Middling to Good Middling Cotton on the first of each Month, with the Rate of Freight to Liverpool, and Sterling Bills, at same date.

1853.	Low Middling to Good ditto.	Sterling. per ct. prm.	Freight. d. per lb.
September	9 $\frac{1}{2}$ to 11 $\frac{1}{2}$	9 to 9 $\frac{1}{2}$	$\frac{1}{2}$ to —
October	10 to 11	8 $\frac{1}{2}$ to 9 $\frac{1}{2}$	$\frac{1}{2}$ to —
November	8 to 9 $\frac{1}{2}$	8 $\frac{1}{2}$ to 10	$\frac{1}{2}$ to $\frac{1}{2}$
December	8 $\frac{1}{2}$ to 10	8 $\frac{1}{2}$ to 9 $\frac{1}{2}$	$\frac{1}{2}$ to —
Jan., 1854	8 $\frac{1}{2}$ to 10 $\frac{1}{2}$	8 to 9	$\frac{1}{2}$ to —

1853.	Low Middling to Good ditto.	Sterling, per ct. prim.	Freight, d. per lb.
February	8½ to 9½	7 to 7½	½ to 11-16
March	8 to 9½	6½ to 7½	13-16 to 15-16
April	8½ to 9½	8 to 8½	11-16 to ½
May	7½ to 9	8 to 9½	13-16 to ½
June	7 to 9	8½ to 9½	½ to 15-16
July	7½ to 9½	7½ to 9½	11-16 to ½
August	7½ to 9½	9½ to 9½	11-16 to —

Table showing the highest and lowest point in each Month, for Low Middling to Middling Cotton.

1853.	Highest.	Lowest.
September	10½ to 11	9½ to 10½
October	10 to 10	8½ to 8½
November	8½ to 9½	7½ to 8½
December	8½ to 9½	8½ to 9
January, 1854	8½ to 9½	8½ to 9½
February	8½ to 9½	8 to 8½
March	9 to 9½	8 to 8½
April	8½ to 9	7 to 7½
May	7½ to 8½	6½ to 7½
June	7½ to 8½	6½ to 7½
July	8½ to 9	7½ to 8½
August	8½ to 8½	7½ to 8½

Table showing the Product of Low Middling to Good Middling Cotton, taking the average of each entire year for nine years, with the Receipts at New-Orleans, and the total Crop of the United States.

	Total Crop. Bales.	Receipts at New-Orleans. Bales.	Average Price. Cents per lb.
1845-6	2,100,537	1,041,393	6½
1846-7	1,778,651	707,324	10
1847-8	2,347,634	1,189,733	6½
1848-9	2,728,596	1,100,636	6½
1849-50	2,096,706	797,387	11
1850-51	2,355,257	995,036	11
1851-52	3,015,029	1,429,183	8
1852-3	3,262,882	1,664,864	9
1853-4 .. estimated	2,930,000	1,440,779	8½

The total receipts at this port, since the 1st September last, from all sources, are 1,440,779 bales. This amount includes 62,056 bales received from Mobile and Florida, and from Texas *by sea*; and this being deducted, our receipts proper, including 33,798 bales received direct from Montgomery, Wetumpka, &c., are shown to be 1,378,723 bales; being a decrease as compared with last year of 224,085 bales. The total exports since 1st September are 1,429,180 bales, of which 813,736 bales were shipped to Great Britain, 193,571 to France, 229,346 to the North and South of Europe, and 192,527 to United States ports. On a comparison of the exports with those of last year, there would appear to be a falling off of 108,350 bales to Great Britain, 17,955 to France, 15,327 to the North and South of Europe, and 74,169 to United States ports. The total receipts, at all the Atlantic and Gulf ports, up to the latest dates received—as shown by our general cotton table—are 2,893,414 bales; but the actual crop, when made up to the 1st September, by the New-York Shipping and Commercial List, with the difference of stocks at Augusta and Hamburg, receipts overland,

&c., will probably not be far from 2,930,000 bales; a decrease of 332,000 bales as compared with the crop of last year.

We have thus shown the distribution of that portion of the crop exported from this port, and will now proceed to give some general statistics connected with the cotton trade, which we apprehend may be of more or less interest to producers, dealers and consumers.

As we have already remarked, the receipts at this port contained an unusually large proportion of the inferior and ordinary grades, besides much that was reduced and made uncertain in class and quality by frost stain, and this preponderance of the low grades occurred at a peculiarly unfortunate juncture, as there was brought into competition with them, in the markets of Great Britain, an unusually large import of Surat (East India) cottons, and the two combined gave so large a proportionate supply of the low qualities as materially to affect the prices of both. The import of Surats into Great Britain, in 1853, exceeded the import in 1852 by 264,114 bales.

The total consumption of Europe, for the years 1853 and 1852, was as follows:—

	1853.	1852.
Great Britain..... bales..	1,835,109..	1,896,075
France.....	459,676..	476,660
Russia.....	166,359..	141,959
Hamburgh and Bremen....	142,506..	127,535
Holland and Belgium.....	133,823..	145,678
Trieste.....	101,971..	126,314
Spain.....	91,618..	94,541
Genoa, Leghorn & Naples,	63,000 }	68,950
Norway and Sweden,	27,948 }	
Total.....	3,042,000..	3,077,712
Add consumption, U.S., say	700,000..	650,000
Total consumption of 1853.	3,742,000..	3,027,712
Total consumption of 1852.	3,737,712	
Increase.....	14,288	

The supply of 1853 and 1852 may be stated as follows:—

	1853.	1852.
Stock in Gr't Britain, bales.	657,520..	494,600
Stock on the Continent....	89,461..	93,713
Stock in U. States ports....	91,176..	128,000
	838,157	716,313
Crop of the United States..	3,262,882..	3,015,000
Imports from Brazil.....	132,443..	144,197
“ West Indies.....	9,239..	12,580
“ Egypt.....	105,398..	189,935
“ East Indies..	485,527..	221,413
Total supply in 1853.....	4,833,646..	4,299,438
Total supply in 1852.....	4,299,438	
Increase.....	534,208	

The following table exhibits the import, delivery, stock, &c., in the whole of Great Britain, for the first six months of the current year, ended 30th June last, and a comparison with the same period in 1853. By this it will be seen that the quantity taken for consumption in Great Britain, for the first six months of 1854, shows a falling off as compared with the same period in 1853 of nearly 100,000 bales; and there is likely to be a decrease in the consumption of the United States for the current year of about an equal amount.

	1854.	1853.
Stock, 1st January	bales... 717,560.....	657,520
Import six months.....	1,390,450.....	1,524,730
	2,108,030	2,182,250
Export six months.....	113,250.....	155,800
Consumption..	941,080.....	1,040,150—1,195,950
Stock, 30th June.....	1,053,700.....	986,300
Weekly average taken for consumption.....	36,195.....	40,095
Taken on speculation.....	265,980.....	400,890

The following tables, which have explanatory captions, we have compiled from our records, under the impression that they would probably be found interesting to parties engaged in the cotton trade:

Season.	Receipts at New-Orleans.	Average Price per Bale.	Total Value.
1843-44.....	910,854.....	32 00.....	29,147,328
1844-45.....	979,238.....	24 00.....	23,501,712
1845-46.....	1,053,633.....	32 00.....	33,716,256
1846-47.....	740,669.....	44 00.....	32,589,436
1847-48.....	1,213,805.....	29 00.....	35,200,345
1848-49.....	1,142,382.....	27 00.....	30,844,314
1849-50.....	837,723.....	50 00.....	41,886,150
1850-51.....	995,036.....	49 00.....	48,756,764
1851-52.....	1,429,183.....	34 00.....	48,592,222
1852-53.....	1,664,864.....	41 00.....	68,259,424
1853-54.....	1,440,779.....	38 00.....	54,749,602
Total ten years 12,408,166			\$447,243,553

It will be seen by the above table that the cotton alone sold in this market within the past eleven years, has yielded a gross product of 447,243,553.

Date of Receipt of First Bale.	Receipts New Crop to Sept. 1.	Total Receipts at New-Orleans.	Total Crop of U. States.	
1843—August 17..	292.....	1843—4.....	850,342.....	2,030,409
1844—July 23...	5,720.....	1844—5.....	954,285.....	2,394,503
1845—July 30...	6,846.....	1845—6.....	1,041,393.....	2,100,537
1846—August 7...	140.....	1846—7.....	707,324.....	1,778,651
1847—August 9...	1,089.....	1847—8.....	1,188,733.....	2,347,634
1848—August 5...	2,864.....	1848—9.....	1,090,797.....	2,728,596
1849—August 7...	477.....	1849—50.....	797,397.....	2,096,706
1850—August 11..	67.....	1850—51.....	950,220.....	2,355,257
1851—July 25...	3,155.....	1851—52.....	1,429,183.....	3,015,029*
1852—August 2...	5,077.....	1852—53.....	1,664,864.....	3,262,882
1853—August 9...	74.....	1853—54.....	1,440,779.....	*2,930,000
1854—July 25....	1,391.....			

With respect to the growing crop, we have to remark that up to this time it is understood to present favorable promise in most sections, though its backwardness, compared with the large crop year 1852, as indicated by the receipts, may be regarded as an important consideration, as early maturity and a long and favorable picking season are absolute essentials to the securing of a full yield. It is true that a few bales were received from Texas (where the plant matures early) several days in advance of the first arrival last year, but these ambitious first bales are for the most part a fallacious guide in estimating the forwardness of the crop generally. The total receipts of new crop, also, up to this time, are considerably in excess of the same period last year; but it should be borne in mind that the obstacles which then interposed to prevent the earlier forwarding of supplies have had no existence during the present season. The result, whatever it may be, is in the future, and estimates (which we ourselves never indulge in) made at this early period of the season are mere speculations, which may be right within a few thousand bales or wrong hundreds of thousands.

With respect to the market prospects for the growing crop, we think they might unhesitatingly be declared to be favorable for the absorption of even a large yield, at remunerative prices, were it not for the war in Europe, the duration of which, and its possible complications, as well as the extent of influence which it is likely to exercise upon the cotton interest, being matters quite beyond the reach of human foresight. As prominent, however, among the favorable circumstances bearing upon the

* Estimated.

subject, we may mention the flattering prospects for abundant food crops in Europe, which is a matter of primary importance as connected with the cotton interest; and as our own country has now become a large consumer, with a prospect of a rapid extension of its manufacturing enterprises, it may not be unsafe to predict the realization of a range of prices that will afford a fair return to the producer, notwithstanding the adverse influences growing out of a state of war.

Two bales of the *new crop* were received here from Texas on the 25th July, and the total receipts up to this time are 1,391 bales, against 74 bales last year, and 5,077 the year previous. Thus far only about 150 to 200 bales have been sold, in various small lots, and at prices ranging from 9 to 11 cents per pound for middling to fully fair, but these small transactions form no criterion of what prices may be at a fair opening of the market. There is but little demand at the moment for either old or new crop, and the season closes with a stock on hand, inclusive of all on shipboard not cleared, of 24,121 bales, of which there are estimated to be some 5,000 bales unsold in factors' hands, including some lots held under limits. We quote as follows, though the figures are in a great measure nominal.

Ordinary.....	6½ to 7	Middling.....	8½ to 9½
Good Ordinary.....	7½ to 7¾	Good Middling.....	9 to 9½
Low Middling.....	7¾ to 8	Middling Fair.....	9½ to 9¾

Sugar.—According to the annual statement of Mr. P. A. Champomier, the total crop made in Louisiana in 1853 reached 449,324 hogsheads; thus exceeding the crop of 1852 (previously the largest) in the important amount of 127,390 hogsheads. This was the product of 1,437 sugar houses, of which 956 were worked by steam and 481 by horse-power; and 366,667 hogsheads brown sugar were made by the old process in open kettles, while of refined, clarified and cistern bottoms the product is stated at 82,657 hogsheads, the cistern bottoms being computed at 5 per cent. on the product of brown sugar, as above. The estimated weight of the crop is 495,156,000 pounds. Notwithstanding this large excess of production over any previous year, it appears from the statement of Mr. Champomier that "many small planters had abandoned the cultivation of the cane, and that even some pretty large plantations were substituting cotton for it," so that while the crop of 1852 was the product of 1,481 sugar-houses, that of 1853, according to Mr. C., was from 1,437—a decrease of 44.

This large increase in the Louisiana crop, itself a potent cause of a reduction of prices, has also had to contend with unusually large stocks of the previous crop lying over in the markets of the West, with an increased import from foreign countries and with unusually high rates of freight to other markets; and the depressing effect of these combined influences has resulted in a lower average of prices than we have had occasion to notice in any previous year. Besides this, the cost of transportation from the interior to this market has been higher than usual, while the price of fuel (which many planters had to purchase) has been greatly enhanced, and thus the net return per hogshead to the planter has been reduced to an unusually low figure. The quality of the crop was below the usual average, and at the lowest point of the market, in April and May, sales of inferior were made from the Levee at the reduced rate of *one cent* per pound.

The first arrival of the *new crop* was on the 6th October, when four hogsheads were received from Bayou Sara, classing strictly prime, which sold at 6 cents per lb.; but there was no fair opening of the market until the early part of November, when the range of prices was 3¾ to 4½ cents per pound for fair to prime quality. The course of the market throughout the season is indicated by the following table, which exhibits the highest and lowest points in each month for *fair sugar* on the Levee.

1853-54.	Highest.	Lowest.
September.....cents. per lb.	4½ to 4½	4 to 4½
October.....	4½ to 4½	3½ to 4
November.....	3½ to 4	3½ to 3½
December.....	3½ to 3½	3½ to 3½
January.....	3½ to 3½	3½ to 3½
February.....	3½ to 3½	3 to 3½
March.....	3½ to 3½	3 to 3½
April.....	3 to 3½	2½ to 3½
May.....	2½ to 3½	2½ to 3½
June.....	3 to 3½	3 to 3½
July.....	3½ to 3½	3 to 3½
August.....	3½ to 4	3½ to 3½

The first notice of sales on plantation was about the middle of January, when two crops were reported at 3½ to 3½ cents per lb. Subsequently transactions to a fair extent were noticed from time to time, but a large portion of the transactions on plantation were made directly by the planters and Western dealers, and not reported. Besides which, an unusually large proportion of the crop has been brought to the city and sold from the Levee, the receipts this season having been 274,906 hogsheads, against 186,001 hogsheads last year. The prices of the reported sales on plantation have been 3, 3½, 3 3-16, 3½, 3 5-16, 3½, 3½, 3½, 3 11-16, 3¾, 4 and 4½ cents per pound.

The estimated stock on hand at the close of last season was 8,000 hogsheads, and this amount being added to the crop—449,324 hogsheads—would make a supply of 457,324 hogsheads. The distribution of this supply, as nearly as can be ascertained, has been as follows:—Shipments to places out of the State, as shown by our tables, and including the exports from Attakapas, 180,906 hogsheads; consumption of the city and neighborhood, 30,000 hogsheads; taken for refining, in city and other parts of the State, including cistern bottoms, 5,000 hogsheads, estimated quantity taken to fill up hogsheads for shipment, 50,000 hogsheads; stock now on hand in the State, estimated at 7,500 hogsheads; leaving as the quantity taken for the West 184,918 hogsheads, against 206,934 hogsheads last year. The quantity shipped to Atlantic ports is 166,336 hogsheads, against 82,000 hogsheads last year.

The import of foreign sugars into this port has been less than for several years past, consisting of only 2,797 hogsheads and 13,578 boxes Cuba, and 3,288 bags Manilla.

According to a statement made up by the New-York Shipping and Commercial List, the total import of foreign sugar into the United States for the year ended January 1st, 1854, was 212,746 tons, and the total consumption of foreign and domestic cane sugar in the United States for the year 1853 was 372,989 tons, which is equal to about 746,000 hogsheads; showing an increase, as compared with the previous year, of 57,772 tons, (equal to 115,000 hogsheads), or nearly 18½ per cent. Besides the above, it is estimated that there have entered into the consumption some 15,000 tons of sugar made from foreign and domestic molasses, and about 12,500 tons maple sugar, which would give a grand total of 400,489 tons, or about 800,000 hogsheads.

With respect to the growing crop, the cane fields are said to present a rather less flattering promise for a large product than they did at this period last year, when the crop generally in this State presented a remarkably flourishing appearance, and the result was a yield per acre and an aggregate product beyond all former precedent. Still, however, the promise is acknowledged to be very fair; and, should the season prove favorable for maturing the cane, and no severe frost interpose, a very respectable yield may reasonably be calculated on. The following table, which runs through a period of twenty-four years, will show marked fluctuations in the product.

Crop of 1853.....	449,324 hhd.	Crop of 1841.....	90,000 hhd.
" 1852.....	321,034 "	" 1840.....	67,000 "
" 1851.....	236,547 "	" 1839.....	115,000 "
" 1850.....	211,303 "	" 1838.....	70,000 "
" 1849.....	247,923 "	" 1837.....	65,000 "
" 1848.....	220,000 "	" 1836.....	70,000 "
" 1847.....	240,000 "	" 1835.....	30,000 "
" 1846.....	140,000 "	" 1834.....	100,000 "
" 1845.....	186,650 "	" 1833.....	75,000 "
" 1844.....	200,000 "	" 1832.....	70,000 "
" 1843.....	100,000 "	" 1831.....	48,000 "
" 1842.....	140,000 "	" 1830.....	88,000 "

Exports of Cotton and Tobacco from New-Orleans for five years, commencing September 1, and ending August 31.

COTTON—BALES.					
Whither Exported.	1853-54.	1852-53.	1851-52.	1850-51.	1849-50.
Liverpool.....	779,021	669,835	761,172	569,277	376,155
London.....		50			1,367
Glasgow and Greenock.....	12,851	39,767	11,700	15,418	10,857
Cowes, Falmouth, &c.....	15,611	12,434	7,211	4,678	3,741
Cork, Belfast, &c.....	6,253		2,159		3,069
Havre.....	185,254	202,957	183,054	125,067	112,159
Bordeaux.....	1,285	2,317	1,654	1,164	1,006
Marseilles.....	5,019	5,008	4,308	4,131	3,618
Nantz, Cette & Rouen.....	5,013	1,154	7,338		630
Amsterdam.....	4,211	1,375	250	480	
Rotterdam and Ghent.....	1,310	1,929	1,507	1,468	572
Bremen.....	32,349	14,621	10,248	12,905	1,801
Antwerp, &c.....	9,010	22,232	24,562	10,366	11,994
Hamburg.....	23,700	10,531	17,694	3,235	113
Gottenburg.....	13,152	7,392	6,634	8,180	5,021
Spain and Gibraltar.....	58,796	51,443	47,645	41,018	46,296
Havana, Mexico, &c.....	24,935	20,693	11,919	565	2,292
Genoa, Trieste, &c.....	32,240	76,902	75,093	42,537	36,362
China.....					
St. Petersburg, &c.....	9,634	37,502	15,046	11,143	6,496
New-York.....	58,168	73,043	101,938	52,398	84,891
Boston.....	113,831	151,580	128,629	82,540	109,089
Providence, R. I.....		16,028	4,561		
Philadelphia.....	14,054	19,362	15,594	14,867	15,616
Baltimore.....	4,037	5,126	4,745	2,511	4,017
Portsmouth.....	2,139				
Other coastwise ports.....	358	357	45	1	230
Western States.....		1,200	1,200	500	
Total.....	1,499,180	1,644,981	1,435,615	997,358	838,591

TOBACCO—HIDS.					
Whither Exported.	1853-54.	1852-53.	1851-52.	1850-51.	1849-50.
Liverpool.....	6,300	9,459	7,644	6,457	6,662
London.....	5,048	6,082	5,197	6,192	6,723
Glasgow and Greenock.....					
Cowes, Falmouth, &c.....	573	610	982	574	3,345
Cork, Belfast, &c.....					
Havre.....	5,707	1,482	9,056	659	718
Bordeaux.....	2,317	169	1,916	517	579
Marseilles.....	4,423	1,257	2,970	3,006	759
Nantz, Cette and Rouen.....					
Amsterdam.....	624	900	1,157		
Rotterdam and Ghent.....	644	282	223	719	824
Bremen.....	7,970	13,053	13,513	7,071	7,719
Antwerp, &c.....	3,926	4,034	7,618	570	2,944
Hamburg.....		125	473	75	573
Gottenburg.....	768	414	1,299	941	1,365
Spain and Gibraltar.....	6,289	10,175	7,662	7,454	4,726
Havana, Mexico, &c.....					
Genoa, Trieste, &c.....	1,128	1,966	11,134	5,613	5,874
China.....					
St. Petersburg, &c.....	2,479	2,647	2,533	816	1,375
New-York.....	4,318	7,231	13,347	10,067	11,305
Boston.....	126	1,331	1,941	1,169	1,169
Providence, R. I.....					
Philadelphia.....	190	688	1,296	1,118	1,261
Baltimore.....	50	124	385	754	277
Portsmouth.....					
Other coastwise ports.....	116	147	230	291	337
Western States.....					
Total.....	53,043	64,075	93,715	54,501	57,935

EXPORTS OF COTTON, ETC., FOR FIVE YEARS.

623

RECAPITULATION COTTON—BALES.

Great Britain.....	813,736	922,086	772,242	582,373	397,189
France.....	193,571	211,526	196,254	130,362	117,413
North of Europe.....	93,375	95,635	75,950	47,786	25,196
South of Europe, Mexico, &c.....	135,971	149,038	134,657	84,120	84,850
Coastwise.....	192,527	266,696	256,712	152,817	213,843
Total.....	1,429,180	1,644,981	1,435,815	997,458	838,591

TOBACCO—HHDs.

Great Britain.....	11,981	16,150	14,023	13,223	16,820
France.....	12,447	2,908	13,948	4,182	2,036
North of Europe.....	13,532	20,798	26,814	9,393	12,725
South of Europe, Mexico, &c.....	9,889	14,698	21,731	13,559	11,975
Coastwise.....	4,794	9,521	17,199	13,844	14,379
Total.....	53,043	64,075	93,715	54,501	57,955

Exports of Sugar and Molasses, from New-Orleans, for two years, (up the river excepted,) from September 1 to August 31.

Whither Exported.	1853-54.				1852-53.			
	Sugar hhd.	Sugar bbl.	Molasses hhd.	Molasses bbl.	Sugar hhd.	Sugar bbl.	Molasses hhd.	Molasses bbl.
New-York.....	102,820	3,605	854	103,019	46,561	169	—	51,420
Philadelphia.....	21,090	1,138	—	24,514	11,170	273	—	6,376
Charleston, South Carolina.....	5,449	140	—	13,020	3,823	407	—	10,621
Savannah.....	2,301	13	—	11,140	1,613	149	—	3,777
Providence and Bristol, R. I.....	200	—	—	1,700	2,631	—	—	148
Boston.....	6,518	62	—	16,155	82	174	213	2,314
Baltimore.....	17,181	349	—	30,908	10,945	140	—	10,327
Norfolk.....	7,087	9	—	12,160	3,629	173	—	4,760
Richmond & Petersburg, Va.....	2,090	—	3	1,387	1,170	—	—	1,359
Alexandria, D. C.....	9,031	—	—	33,303	9,540	175	—	24,153
Mobile.....	2,181	157	—	12,494	1,546	155	—	5,657
Apalachicola and Pensacola.....	3,658	1,244	—	3,545	1,022	2,398	—	963
Other ports.....	—	—	—	—	—	—	—	—
Total.....	179,406	6,716	857	262,345	93,733	4,912	213	121,875

Exports of Flour, Pork, Bacon, Lard, Beef, Lead, Whiskey, and Corn, from September 1 to August 31.

Ports.	1853-54.							
	Flour bbl.	Pork bbl.	Bacon hhd.	Lard kegs.	Beef bbl.	Lead pigs.	Whiskey bbl.	Corn, sacks.
New-York.....	33,129	43,616	2,963	87,088	5,081	31,856	1,993	70,236
Boston.....	7,181	62,401	5,970	100,221	7,994	44,655	597	50,873
Philadelphia.....	91	668	18	1,541	60	7,688	58	2,562
Baltimore.....	—	6,925	130	—	76	—	77	—
Other coastwise ports.....	117,940	21,776	25,559	23,054	324	—	46,286	261,719
Great Britain.....	190,455	5,997	9,914	391,129	12,722	—	—	633,380
Cuba.....	5,905	2,376	1,840	174,953	75	—	—	38,687
Other foreign ports.....	231,268	11,485	908	25,144	1,605	376	23	40,575
Total.....	585,969	155,344	46,688	808,430	27,877	84,475	48,334	1,107,032

In the above, the Exports to Mobile, &c., via the Pontchartrain Railroad and New Canal, are included.

Monthly Arrivals of Ships, Barks, Brigs, Schooners, and Steamboats, for three years, from September 1 to August 31.

Months.	1853-54.							1852-53.							1851-52.						
	Ships.	Barks.	Brigs.	Scho.	S. Ships.	Total.	S. Boats.	Ships.	Barks.	Brigs.	Scho.	S. Ships.	Total.	S. Boats.	Ships.	Barks.	Brigs.	Scho.	S. Ships.	Total.	S. Boats.
Sept.....	25	8	12	12	15	72	97	46	20	10	42	18	130	197	31	21	12	43	14	121	140
Oct.....	24	15	5	22	12	78	159	105	20	20	39	19	203	208	74	32	26	51	18	201	186
Nov.....	75	42	19	31	15	182	311	83	38	20	46	17	204	290	107	26	19	44	14	210	194
Dec.....	85	36	32	67	20	238	354	63	41	30	60	19	213	411	105	66	41	77	14	303	293
Jan.....	126	47	27	55	20	275	311	83	67	40	66	24	280	427	69	39	29	55	13	205	297
Feb.....	60	41	22	69	15	207	363	58	66	54	94	25	297	410	95	33	30	70	18	246	285
March.....	52	26	24	41	20	163	348	142	77	39	69	90	346	357	74	29	30	64	20	217	365
April.....	90	36	22	47	18	213	367	72	32	25	54	24	307	279	59	27	24	76	24	210	290
May.....	59	29	19	41	22	170	307	50	29	16	47	23	164	294	92	33	26	60	17	227	242
June.....	54	23	14	35	18	144	216	48	29	22	33	21	153	160	59	30	21	55	24	189	238
July.....	36	16	14	23	16	104	121	9	15	10	27	17	78	119	20	21	17	41	19	118	137
Aug.....	27	17	7	36	15	102	122	23	13	10	19	18	83	101	22	15	12	37	18	104	121
Total.....	713	330	117	478	204	1,948	3,076	782	447	295	506	244	2,364	3,253	807	371	287	673	312	2,351	2,778

VALUE OF PRODUCE OF THE INTERIOR.

A Table showing the Receipts of the principal articles from the Interior during the year ending 31st August, 1854, with their estimated average and total value.

ARTICLES.	Am't.	Av'ge.	Value, Dollars.	ARTICLES.	Am't.	Av'ge.	Value, Dollars.
Apples, bbis.	47451	\$4 00	169804	Lead, white, kegs.	544	4 00	2176
Bacon, ass'd, hhds. } and caks.	37664	55 09	9071520	Molasses, (estim'd } crop) gals.	3100000	12	3720000
Bacon, assorted, bxs.	9931	20 00	198620	Oats, bbis. and sacks.	586451	1 00	586451
Bacon, hams, hhds. } and tress.	23155	50 00	1607750	Onions, bbis.	22893	3 00	68679
Bacon, in bulk, lbs.	121000	6	7250	Oil, Linseed, bbis.	539	32 00	17248
Bagging, pieces.	43283	14 00	633682	Oil, Castor, bbis.	2438	35 00	85330
Bale Rope, coils.	102274	8 00	818192	Oil, Lard, bbis.	14298	35 00	500430
Beans, bbis.	13459	5 00	67295	Potatoes, bbis.	206673	2 00	412546
Butter, kgs and fks.	47649	7 00	333543	Pork, tcs and bbis.	249188	12 00	2990254
Butter, bbis.	1934	30 00	58020	Pork, bxs.	15206	28 00	425768
Beeswax, bbis.	161	50 00	8050	Pork, hhds.	1750	65 00	113750
Beef, bbis.	29710	13 00	386230	Pork, in bulk, lbs.	12646600	5	632330
Beef, tcs.	10301	20 00	206020	Porter and Ale, bbis.	1770	10 00	17700
Beef, dried, lbs.	31601	9	2844	Packing Yarn, reels.	2443	7 00	17101
Buffalo robes, pkgs.	12	80 00	960	Skins, Deer, packs.	305	30 00	9150
Cotton, bales.	1440779	38 00	54749602	Skins, Bear, packs.	4	15 00	60
Corn meal, bbis.	355	4 00	1420	Shot, kegs.	3675	24 00	88200
Corn in ear, bbis.	48404	90	43543	Soap, bxs.	9173	3 50	32105
Corn, shelled, sacks.	1740268	1 50	2610400	Staves, M.	2500	37 00	92500
Cheese, bxs.	58132	4 00	232528	Sugar, (estimated } crop) hhds.	449324	35 00	15726340
Candles, bxs.	72299	7 00	506093	Spanish Moss, bales.	4466	15 00	66990
Cider, bbis.	89	3 00	267	Tallow, bbis.	371	30 00	11130
Coal, Western, bbis.	1000000	60	600000	Tobacco, Leaf, hhds.	36405	80	2912400
Dried apples and } peaches, bbis.	7353	5 00	26765	" Strips, hhds.	10600	1 20	1274000
Feathers, bags.	1377	50 00	68850	" Stems, hhds.	1000	23 00	43700
Flax-seed, tcs.	192	9 00	1728	" Chewing,	4617	25 00	115425
Flour, bbis.	874256	7 00	6119792	kgs. & bxs.	3905	8 00	31216
Furs, hhds., bun- } dles and bxs.	1048	—	400000	Twine, bundles & } boxes.	422	6 00	2532
Hemp, bales.	10992	30 00	599760	Vinegar, bbis.	128925	10 00	1289250
Hides.	112489	2 25	253100	Whiskey, bbis.	24857	3 00	74571
Hay, bales.	72604	4 00	290656	Window Glass, bxs.	184943	3 00	554829
Iron, pig, tons.	515	40 00	20600	Wheat, bbis & sacks.	6000000	—	6000000
Lard, bbis and tcs.	133065	24 00	3193580	Other articles, estimated at.	—	—	—
Lard, kgs.	110477	4 50	497140				
Leather, bundles.	5690	35 00	199150	Total value—dollars.	—	—	115336798
Lime, Western, bbis.	21300	1 50	32085	Total in 1852-53.	—	—	134233735
Lead, pigs.	74226	5 00	371480	Total in 1851-52.	—	—	108051708
Lead, bar, kgs. and } bxs.	210	30 00	6300	Total in 1850-51.	—	—	106924083

Comparative Statement of Receipts, Exports, and Stocks of Cotton at the following places and dates annexed:—

PORTS.		Stocks on hand Sept. 1.		Received since Sept. 1.	
		1853.	1852.	1853.	1852.
New-Orleans.	Aug. 31.	10,523.	9,738.	1,378,723.	1,603,969.
Mobile.	Aug. 25.	7,516.	2,319.	502,337.	515,770.
Savannah.	Aug. 24.	5,150.	2,950.	314,030.	341,657.
Charleston.	Aug. 21.	15,126.	11,146.	413,176.	450,162.
Florida.	Aug. 14.	523.	451.	135,547.	178,495.
Va. and N. C.	Aug. 19.	400.	450.	21,695.	26,882.
Texas.	Aug. 20.	428.	317.	107,906.	85,227.
New-York.	Aug. 23.	35,962.	45,796.	—	—
Other ports.	Aug. 19.	32,182.	14,282.	—	—
Total bales.		127,809.	87,469.	2,893,414.	3,212,182.
Total to date, 1853.		87,469.	—	3,212,182.	—
Increase this year.		40,340.	—	—	—
Decrease.		—	—	318,768.	—
		Exported from Sept. 1, 1853, to dates.			
PORTS.		To Gt.	To	Total	U. S.
		Britain.	France.	for 'gu pts.	N'n pts.
New-Orleans.	Aug. 31.	813,736.	193,571.	229,346.	1,226,653.
Mobile.	Aug. 25.	225,218.	74,374.	29,084.	328,676.
Savannah.	Aug. 24.	92,363.	6,487.	3,591.	102,441.
Charleston.	Aug. 21.	102,970.	41,345.	31,512.	235,757.
Florida.	Aug. 14.	43,086.	1,965.	2,429.	47,480.
Va. and N. C.	Aug. 19.	360.	—	—	300.

GENERAL TABLES OF COMPARISON.

625

Ports.	Exported from Sept. 1, 1853, to dates.				U. S. N't p'ts.
	To Gt. Britain.	To France.	To other foreign p'ts.	Total foreign p'ts.	
Texas.....Aug. 26.....	6,191.....	4,275.....	8,001.....	18,467.....	67,218
New-York.....Aug. 22.....	241,141.....	45,303.....	31,664.....	318,108.....	—
Other ports.....Aug. 19.....	7,338.....	—.....	2,689.....	10,027.....	—
Total sales.....	1,592,343.....	367,320.....	338,346.....	2,297,909.....	867,411
Total to date, 1853.....	1,734,067.....	426,366.....	361,846.....	2,522,279.....	946,811
Increase this year.....	—.....	—.....	—.....	—.....	—
Decrease.....	141,724.....	59,146.....	23,500.....	224,370.....	79,400

We have taken from New-Orleans the amounts received from Mobile, Florida, and Texas; also from Charleston the receipts from Savannah; and Mobile the receipts from Florida. The exports from Georgetown to New-York are added to the Charleston receipts, and those from Darien to Liverpool and New-York are added to the Savannah receipts. The exports from Mobile and Florida to New-Orleans, and those from Savannah to Charleston, have been deducted from exports to Northern ports.

Comparative Prices of Middling to Fair Cotton at New-Orleans, on the first of each month, during a period of five years, together with the total receipts at New-Orleans, and the total crops of the United States.

MONTHS.	1853-54. Cents.	1852-53. Cents.	1851-52. Cents.	1850-51. Cents.	1849-50. Cents.
September.....	10 1/2 a —.....	9 1/2 a 11.....	9 a 10.....	9 a 11.....	9 1/2 a 11 1/2
October.....	10 1/2 a —.....	9 1/2 a 11.....	8 a 9 1/2.....	12 1/2 a 13 1/2.....	9 1/2 a 12
November.....	8 1/2 a —.....	9 1/2 a 10 1/2.....	7 a 8 1/2.....	13 1/2 a 14.....	9 1/2 a 11
December.....	9 1/2 a —.....	8 1/2 a 10 1/2.....	7 1/2 a 8 1/2.....	13 1/2 a 14.....	10 1/2 a 11 1/2
January.....	9 1/2 a —.....	8 1/2 a —.....	7 1/2 a 8 1/2.....	12 1/2 a 13 1/2.....	10 1/2 a 11 1/2
February.....	9 1/2 a —.....	8 1/2 a —.....	7 1/2 a 8 1/2.....	12 1/2 a 13 1/2.....	11 1/2 a 12 1/2
March.....	8 1/2 a —.....	8 1/2 a —.....	7 1/2 a 8 1/2.....	10 1/2 a 11.....	10 1/2 a 12 1/2
April.....	8 1/2 a —.....	9 1/2 a —.....	7 1/2 a 8 1/2.....	10 1/2 a 11.....	10 1/2 a 12
May.....	8 1/2 a —.....	9 1/2 a —.....	7 1/2 a 8 1/2.....	9 1/2 a 11.....	11 1/2 a 13
June.....	7 1/2 a —.....	10 a —.....	9 1/2 a —.....	8 1/2 a 11.....	11 1/2 a 13 1/2
July.....	8 1/2 a —.....	9 1/2 a —.....	9 1/2 a —.....	8 a 10 1/2.....	11 1/2 a 13 1/2
August.....	8 1/2 a —.....	10 a —.....	9 1/2 a —.....	7 a 9 1/2.....	12 1/2 a 13 1/2
Receipts, N. O.	Bales. 1,440,779.....	Bales. 1,664,864.....	Bales. 1,429,183.....	Bales. 1,053,633.....	Bales. 707,387
Crop of U. S.	2,930,000.....	3,220,000.....	3,015,029.....	2,350,537.....	2,006,706

Comparative Arrivals, Exports, and Stocks of Cotton and Tobacco, at New-Orleans, for ten years, from 1st September each year.

YEARS.	Cotton—Bales			Tobacco—Hhds		
	Arrivals.	Exports.	Stocks	Arrivals.	Exp'ts.	St'ks.
1853-54.....	1,440,779.....	1,429,180.....	24,121.....	48,905.....	53,043.....	24,045
1852-53.....	1,664,864.....	1,644,981.....	10,522.....	75,010.....	64,075.....	29,166
1851-52.....	1,429,183.....	1,435,815.....	9,758.....	89,675.....	93,715.....	18,831
1850-51.....	993,036.....	997,458.....	15,390.....	64,030.....	54,501.....	23,871
1849-50.....	837,723.....	838,591.....	10,613.....	60,304.....	57,955.....	14,842
1848-49.....	1,142,382.....	1,167,303.....	15,480.....	52,335.....	52,896.....	13,293
1847-48.....	1,213,805.....	1,201,897.....	37,401.....	55,882.....	60,364.....	14,851
1846-47.....	740,669.....	724,508.....	23,493.....	55,588.....	50,375.....	22,336
1845-46.....	1,053,633.....	1,034,657.....	6,839.....	72,899.....	62,045.....	17,024
1844-45.....	979,238.....	984,616.....	7,556.....	71,493.....	68,679.....	7,073

Comparative Prices of Sugar on the Levee, on the first of each month, for five years.

MONTHS.	1853-4. Cents.	1852-3. Cents.	1851-2. Cents.	1850-1. Cents.	1849-50. Cents.
September.....	2 1/2 a 5 1/2.....	3 1/2 a 6 1/2.....	3 1/2 a 6 1/2.....	4 1/2 a 6 1/2.....	3 a 5 1/2
October.....	2 1/2 a 6.....	3 1/2 a 6.....	3 1/2 a 6.....	4 1/2 a 6.....	4 a 6 1/2
November.....	2 1/2 a 5.....	2 1/2 a 6 1/2.....	2 a 6 1/2.....	5 a 6.....	3 a 6
December.....	1 1/2 a 4 1/2.....	2 1/2 a 5 1/2.....	2 a 6.....	3 a 5 1/2.....	3 a 6
January.....	2 a 4 1/2.....	2 1/2 a 5 1/2.....	2 a 5 1/2.....	3 1/2 a 6 1/2.....	2 1/2 a 5
February.....	2 a 4 1/2.....	3 a 5 1/2.....	2 a 5 1/2.....	3 1/2 a 6 1/2.....	2 1/2 a 5
March.....	2 1/2 a 4 1/2.....	3 a 5 1/2.....	2 1/2 a 5 1/2.....	3 1/2 a 6.....	2 1/2 a 5
April.....	1 a 4 1/2.....	2 1/2 a 5.....	2 1/2 a 5 1/2.....	3 1/2 a 6.....	2 1/2 a 5
May.....	1 a 4 1/2.....	2 1/2 a 5.....	2 1/2 a 5 1/2.....	3 a 6 1/2.....	2 1/2 a 5
June.....	1 a 5.....	2 1/2 a 5.....	3 a 6.....	3 a 6 1/2.....	2 1/2 a 5 1/2
July.....	1 1/2 a 5 1/2.....	2 1/2 a 5.....	3 a 6.....	3 1/2 a 6 1/2.....	4 a 6
August.....	3 1/2 a 3 1/2.....	3 1/2 a 6.....	3 1/2 a 6 1/2.....	4 1/2 a 6.....	4 1/2 a 6 1/2

Direct Imports of Coffee, Sugar, and Salt, for three years, from September 1 to August 31.

	1853-4.	1852-3.	1851-2.
Coffee, Havana.....	bags..... 11,507.....	10,812.....	12,525
Coffee, Rio.....	bags..... 228,660.....	338,412.....	353,616
Sugar, Cuba.....	boxes and bbls..... 13,578.....	27,067.....	25,673
Sugar, Cuba.....	hhds..... 2,797.....	2,271.....	1,621
Sugar, Brazil, &c.....	boxes and bags..... 3,288.....	28,777.....	22,857
Molasses, Cuba.....	hhds. and tierces..... 1,864.....	3,456.....	4,948
Molasses, Cuba.....	bbls..... 8,020.....	19,915.....	6,240
Salt, Liverpool.....	sacks..... 543,601.....	536,974.....	580,106
Salt, Turk's Island, &c.....	bush..... 111,933.....	305,478.....	235,952

Comparative Prices of Molasses on the Levee, on the first of each month, for five years.

MONTHS.	1853-4. Cents.	1852-3. Cents.	1851-2. Cents.	1850-1. Cents.	1849-50. Cents.
September.....	13 a 20	16 a 28	25 a 30	20 a 32	10 a 20
October.....	13 a 20	18 a 28	23 a 30	20 a 32	10 a 20
November.....	20 a 23½	25 a 30	18 a 27	25 a 25½	24 a 24½
December.....	12 a 18½	23 a 23½	23½ a 24	23½ a 24	20½ a 20½
January.....	13 a 18	17 a 22	17 a 20½	18 a 24	17 a 19½
February.....	12½ a 18	21 a 24½	15 a 20½	23 a 27½	15 a 20½
March.....	12 a 17½	18 a 24½	20 a 25	22 a 30	12 a 21½
April.....	9 a 15½	17 a 24	15 a 26	25 a 33	10 a 21
May.....	9 a 13	15 a 20	20 a 28	25 a 32	10 a 23
June.....	8 a 11½	14 a 22	22 a 28	25 a 30	21 a 27
July.....	7 a 11	11 a 20½	20 a 28	22 a 30	25 a 33
August.....	6 a 13	13 a 19	18 a 28	20 a 28	20 a 33

Comparative Prices of Flour, on the first of each month, for five years.

MONTHS.	1853-4. Dollars.	1852-3. Dollars.	1851-2. Dollars.	1850-1. Dollars.	1849-50. Dollars.
September.....	5¼ a 6½	3¾ a 4¾	3¾ a 5	4¾ a 5½	4¾ a 5½
October.....	5¼ a 6½	4 a 4¾	3¾ a 4¾	4 a 5½	5 a 5½
November.....	6¾ a 7	4¾ a 4¾	3¾ a 4¾	4¾ a 5½	4¾ a 5½
December.....	6¾ a 6¾	4¾ a 5	3¾ a 4¾	4¾ a 5½	5 a 5½
January.....	6 a 6¾	4¾ a 5½	3¾ a 5½	4¾ a 5	5 a 5½
February.....	7¾ a 7¾	4¾ a 5	4 a 5½	4¾ a 5	5 a 5½
March.....	7 a 7¾	4 a 4¾	4¾ a 4¾	4 a 4¾	5 a 6
April.....	6 a 6¾	3¾ a 4¾	4¾ a 4¾	4¾ a 5	5 a 6
May.....	6¾ a 7¾	3¾ a 4¾	3¾ a 3¾	4¾ a 5	5 a 6¾
June.....	7 a 7¾	3¾ a 4¾	3¾ a 3¾	4¾ a 4¾	6 a 7¾
July.....	6¾ a 7	4¾ a 5	3¾ a 4¾	3¾ a 4¾	5 a 7¾
August.....	6¾ a 8¾	5 a 6¾	3¾ a 3¾	4 a 5¾	4 a 6¾

Art. XI.—THE SOUTH AND ITS PRODUCTS—HORTICULTURE.

No. 1.

[We are indebted to an intelligent planter of Mississippi for the following interesting letter, and for a series of papers which accompanies it. We shall with great pleasure give them to our readers, in this and other numbers of the REVIEW.]

DEAR SIR:—Knowing that you take a warm interest in the industrial resources of the South, I inclose you a short series of papers upon the subject of fruit culture in the South, and which I thought might interest you, as showing that the soil and climate of the planting States are capable of growing the fruits of temperate latitudes with entire success, and that too in regions so far South that the fruits of the tropics meet them. In the census report of 1850, I see the value of the products of gar-

dens and orchards for the State of Mississippi is set down at fifty thousand dollars. I cannot help thinking there must be some error of figures in so low an estimate, as in this county alone the value of our garden and orchard produce would exceed that sum. I have neighbors who inform me that the sale of their *surplus* fruits and garden products averages one hundred dollars per week the year round. The peach crop of this State sent to the New-Orleans market must bring from forty to fifty thousand dollars annually, and the export of apples and pears to the western cities, to New-Orleans, Havana and Galveston, may this year be safely estimated at about the same figures. Many of our planters, too, upon the low lands of the river, and in the upland river counties of this State, cultivate the Irish and sweet potato to a considerable extent, for the supply of the city markets. I have been unable to procure the statistics of all these crops, but I know that the profits of the grower, per acre, have been greatly larger than those of our great staples. A planter who put twenty-five acres of rich low land in the Irish potato, informed me his sales from this crop were four times the amount, per acre, over his land in cotton.

Again. I see no notice in the census of the value of our nurseries. Col. Hebron, of Warren county, advertises for sale 70,000 fruit trees; Mr. Affleck, of this county, has no doubt as many; and if to these is added the stock of the several nurseries about Vicksburg, in Yazoo, and other counties, we have a value on this score of fully half a million of dollars. I truly hope, then, that the census report of 1860 will exhibit the entire South, in this department of her industry, in a more favorable light, and that the planting States, in the value of their horticultural products, will at that date be found to rival the Northern and Western States.

You will note that in fruit culture in the South, I have dwelt upon the importance of *acclimation* in order to insure success. This is not only true in the vegetable kingdom, but applies with as much force to the domestic animals in use among us. It was a sad mistake when many of our planters years ago introduced from Europe or the north the famous Durham breed of cattle and discarded their native stock. The ox, as you are aware, over the entire extent of the planting States, is universally used for draught in all the hauling done upon our plantations, in taking our crops to ports for shipment, and in bringing from the boggy swamps the millions, I was going to say, of cords of wood annually sold to our river steamers. For draught, then, the Durham breed, and I may safely say all the varieties of cattle from northern latitudes, are totally worthless, and an experience of near twenty years enables me to state that they are not superior for the dairy to our native Spanish breed of cattle. Upon

my home place I have tried both the Durham and the pure Ayrshire; and upon one of my plantations upon the river, where I had not crossed even the Spanish breed, I found, by experiment, I could pick out cows that, when as well fed and cared for, gave fully as much milk as any imported ones; and as for the draught, the native stock far surpass in speed, in ability to endure heat, and in strength, any variety of northern origin. Many planters, it is true, from want of care in breeding, have allowed their native stock to degenerate; but an importation from the herds of Texas or Mexico (the source of our native cattle) would, by judicious selection and care in breeding, soon restore them to their original excellence.

It must be gratifying to you who have labored so long and so ably in advancing the interests of the South, to see that many Agricultural and Horticultural Associations have already been organized in the planting States; that great zeal has been manifested in late years in the successful introduction of valuable grasses; that where our virgin soils (as is the case in several States) have become exhausted, *science* is now being looked to for aid in pointing out the necessary means for their restoration. We yet, however, sadly need a greater attention to entomological studies, so that ways and means might be devised to combat the hosts of insects which are making cotton planting so precarious. The army worm, the boll worm, and the insect causing the rot in the pod, (this year cutting short the crop hundreds of thousands of bales,) all should be subjected to investigations such as in Europe the governments have extended to their agricultural interests when invaded by destructive insects, and, which I need not tell you, have always ended, *there*, in discovering means to subdue and extirpate them. I do not ask whether our Patent Office ought not, but cannot they give us aid in a matter so seriously affecting our interests?

Yours, with great respect,

JOHN C. JENKINS.

Adams County, Miss.

Preliminary to some views I will give upon the subject of fruit culture in the South in a subsequent number, I desire in the present communication to call your attention to the entire range of horticulture, and the bearing the subject presents to the Southern landholder, as a source of wealth.

In times past, the products of the garden, but more especially of the orchard, received only a partial attention, or were entirely neglected among us; but at the present day, no one who reads the Southern periodicals devoted to horticulture can have failed to perceive that this department of our industrial resources has received a vast impulse, and that the opinion so generally entertained, that the horticultural productions of temperate latitudes could not be successfully grown in the planting States, is entirely fallacious.

The rapidity and facility of carriage by railroads converging to the seaboard ports of South Carolina and Georgia, in connection with their weekly

or semi-weekly lines of steamships to the North, has enabled the planters of the interior to supply the markets of the great Northern cities with the smaller fruits and vegetables before the frosts and snow have disappeared from the earth at the North. Tons of early peas, of corn in roasting ears, of Irish potatoes, of okra, of beans, and other table luxuries, are now annually raised for export to Northern consumers, and yielding a larger profit to the Southern grower than any crop he can cultivate. Nor has the enterprise of the people of those two States been confined to a single department of horticulture as a source of wealth. Flourishing nurseries have been established; vast orchards of fruit trees have been planted; varieties of fruit originated better suited to the climate than exotic sorts; and the test been fully made, that they can supply Northern markets with delicious varieties of the apple and the pear fully two months earlier than similar fruits mature at the North.

Our own State not having as yet the facilities of access to market enjoyed by our brethren on the Atlantic sea-board, can hardly be expected to rival them in extent of production; nevertheless, our exports already are by no means inconsiderable. I have been unable to ascertain the value of our peach crop and garden produce sent to the New-Orleans market, but I have good authority for saying that one of our peach orchardists upon the low lands of the river has this year realized from the sales of his fruit in the New-Orleans market fully eight hundred dollars to the acre. When the great lines of railroad now under contract are completed through the interior of our State, a portion of the lands and the laborers upon its borders can be most profitably diverted from the culture of cotton to the products of the garden and the orchard, and the supply of both Southern and Northern markets will add largely to the wealth of our State.

That we enjoy a soil and a climate admirably adapted to the successful culture of the best marketable fruits cannot be doubted. A skilful and enterprising planter of Warren county has proved that the pear can be grown in his locality, and yield an immense profit to the acre. Having been favored with the perusal of a letter addressed by Col. Hebron to one of my neighbors, I am enabled to state that his present year's crop has yielded him a profit of six hundred dollars per acre, and when all his trees now planted (about ten thousand) come into bearing, I cannot doubt but his sales will reach, if they do not exceed, fifty thousand dollars per annum. I can also state that his trees are planted in the midst of his cotton, (thus securing them a thorough cultivation,) and that when at mature age, the loss to his cotton crop from their shade, and the land they occupy, is about one-half. Supposing, then, his entire cotton fields planted with fruit trees, he raises still half a crop of cotton, and has the large profit of six hundred dollars per acre besides from his fruit. This profit will not appear surprising when we take into consideration the fine quality of his fruit, its rarity, and consequently its high price in Southern markets.

Even at the North, where there is keen competition, the profits of fruit growing have been larger than that of any other crop. I see from the reports of the New-York State Agricultural Society, that the sales of the farmers in this department have been generally as high as \$100 per acre. The famous Pelham orchard of Newtown pippin apples, upon the Hudson river, so skilfully cultivated by suitable rotation of manures as to be kept in bearing every year, has yielded annually several hundred dollars to the acre; and although Mr. Pell has had numerous competitors, still the price of his apples rose steadily in the London market from nine to over twenty dollars per barrel. His gross sales from two thousand bearing trees, by recent report, amounts to forty thousand dollars per annum. I could refer to many other orchardists at the North, whose profits have been as large, but deem it unnecessary. These results show how valuable a return from

the land the orchard is capable of producing when science is called into requisition in the culture of the trees, and when pains-taking is had in gathering and shipping the fruit. It also shows how readily the planter in the South (in many localities) may be able to add other sources to his income in addition to his cotton crop. The northern farmer puts one part of his land in grass, another part in oats, another in wheat, corn, potatoes, etc., and these crops maturing in succession, guard him against the heavy loss he might otherwise incur from disease, insects, or drought, in case he confines himself to the culture of a single staple.

I will now refer to some statistics of importance in connection with this subject:

The late Mr. Downing, in the second volume of the *Horticulturist*, estimates from data furnished in the Patent Office Reports of Mr. Burke, that the value of the horticultural products of the entire Union amounts to over four hundred and fifty millions of dollars. That its products are more than half as great as those strictly agricultural; almost as large as the whole manufacturing products of the country; and half as large as the manufacturing and all other interests, excepting the agricultural, combined.

In connection with the industrial resources of our country, so vast a source of wealth is just cause for national pride—our products from the garden, the orchard and the nursery, far exceeding in value those of any other country. France alone approximates near to rivalry with us. I find in the *Revue Horticole* of Paris, that the yield of her horticulture for 1846 (not including the vine) is estimated at one hundred and twenty millions of dollars, and giving employment to two and a half millions of laborers; and that the vine culture yields a product annually worth one hundred millions of dollars, and gives employment to five millions of her population.

In an age so utilitarian as ours, the foregoing view of the subject may invest it with stronger claims to attention than any other. It strikes me, however, that there are other and important considerations, especially worthy of notice among the people of the South. As you well know, the South has for years been throwing from ten to twenty millions of dollars annually into the lap of the north, in the excursions of her people for travel and pleasure during the summer months. Suppose one-half or a third only of these millions had been annually devoted to the advancement of Rural Architecture, to the embellishment of our grounds in landscape gardening, to the cultivation of the choicest fruits and flowers among us; and who can doubt but the Southerner would find his home invested with more than Oriental beauty, and opening a source of employment presenting far higher attractions than the unsubstantial pleasures of the northern tour?

In a country where lands are so cheap as in the South, there is no one but who by thrift and industry may soon become a landholder, and there is no occupation in rural life whose agencies are greater in developing social, moral and intellectual refinement in a community, than devotion to horticulture in all its departments. Its pursuit adds elegance to comfort, and throws a new and magic charm over country enjoyment, by refining its occupations into grace, and softening its aspect into beauty.

In the earliest history of our race, we read that the patriarch had attained the summit of earthly happiness when he could sit under the shadow of his own vine and fig tree; and no higher or sublimer tribute to the *beautiful* was ever penned than when the sacred writer exclaims, "Consider the lilies of the field, how they grow; they toil not, neither do they spin; and yet even Solomon, in all his glory, was not arrayed like one of these."

Art. XII.—MANUFACTURES OF UNITED STATES.*

LOCKS—PORCELAIN HANDLES—CLOCKS—PISTOLS AND GUNS—SAW MILLS—
FURNITURE—CARRIAGES—STONE AND BRICK WORKS—INDIA RUBBER—
FLOUR MILLS, ETC.

THE manufacture of locks appears to be rapidly extending. In an establishment at Pittsburg, employing 350 men in making locks, coffee mills, copying presses, etc., good work is turned out.

Another, in New-Haven, Conn., employs about 200 men in making locks and lock handles. The latter are made of colored clay, so mixed as to present a grained appearance. They are first moulded by hand—then turned in a self-acting lathe with great rapidity, and afterwards baked in a furnace. Padlocks are made at New-Haven of a superior quality to those of the same class ordinarily imported to this country, and are not more expensive.

The celebrity attained by New-England in the manufacture of clocks, gives a peculiar interest to anything connected with these manufactories. At one in Connecticut 250 men are employed, and the clocks are made at the rate of 600 in a day, and at a price varying from \$1 to \$10; the average price being \$3.

The frames of the clocks are stamped out of sheet brass, and all the holes are punched simultaneously by a series of punches fixed at the required distances. The wheels, also, are stamped out of sheet brass, and a round beading is raised by a press round their rims, for the purpose of giving them lateral strength. They are cut by a machine having three horizontal axes, carrying each a cutter placed about 4 inches apart. The first cutter is simply a saw, and the second rounds off the teeth. In cutting an escapement wheel, the first cutter is made to cut each tooth entirely round, and then either the second or third axis with its cutter is used for finishing. The pulleys on the three axes are driven by one driving pulley, with three straps working over and in contact with each other.

The plates forming the clock faces, and other discs, are cut out by circular shears. The beaded rims intended to go round the clock faces, varying in size from 15 inches downwards, are stamped in concentric rings out of a disc, and then made of the required form by means of dies and a stamping-press.

The ogee-form given to the wooden framing of the common clock, is formed by a revolving cutter of the required shape, making 7,000 revolutions per minute, over which the piece of

* Continued from last number.

wood is passed by hand,—the requisite pressure downwards being given at the same time.

A circular cutter fixed on a horizontal axis is also used for roughly planing the back parts of the wooden clock. Its diameter is about 18 inches, and it has four lateral projections, carrying four cutters, two gouges, and two chisels. These revolve round a fixed circular centre plate, of about a foot in diameter, against which the work is pressed as it is passed along. Each clock passes through about 60 different hands: more than half the clocks manufactured are exported to England, and of these a large portion are re-exported to other markets.

It is worthy of remark, that the superiority obtained in this particular manufacture is not owing to any local advantages; on the contrary, labor and material are more expensive than in the countries to which the exportations are made; it is to be ascribed solely to the enterprise and energy of the manufacturer, and his judicious employment of machinery.

In a large manufactory at Hartford, from 400 to 500 men are employed in making revolving pistols, at the rate of 1,200 to 1,500 per week.

Self-acting machinery and revolving cutters are used for making all the separate parts, and the tools are made and repaired in a machine-shop which is attached to the works. In another establishment, at Worcester, Connecticut, 175 men are employed in manufacturing guns, rifles, and pistols. Revolvers are made in large numbers with barrels on the old principle, and proved by hydraulic pressure.

In no branch of manufacture does the application of labor-saving machinery produce, by simple means, more important results than in the working of wood. Wood being obtained in America in any quantity, it is there applied to every possible purpose; and its manufacture has received that attention which its importance deserves.

It would be difficult to point in any country to a more successful application of machinery to the working of wood than was made in this country long ago, in the manufacture of ship blocks, by the late Sir Isambard Brunell, aided by the late Mr. Maudslay: other instances of mechanism most ingeniously adapted to similar purposes might also be cited. It cannot therefore be said that nothing has been done in this branch of manufacture by ourselves; but it must be confessed that the improvements which have been made have not been extended, as they might have been, to ordinary purposes, though in this respect a desire for progress is now evidently manifested. A house in Liverpool is importing the best machines of the kind in use in America, and is making great efforts to introduce them generally into this country.

The trees sawn up in the Lowell saw-mills are floated down from the interior of the country, by river; they are docked in a basin in the timber-yard, and are dragged up an inclined plane into the interior of the mill, as they are wanted.

In an upper story are placed two large saw-frames, and between them travels an endless chain, running along the shop-floor over pulleys, and extending down the inclined plane nearly to the edge of the basin. To any part of this endless chain may be hooked another chain, which being passed round one or more trees as they lie in the basin, drags them up into the mill and deposits them alongside the saw-frames. Shingles used for covering the roofs and sides of houses are made in vast quantities. A circular saw cuts them 16 inches long, from 3 to 9 inches wide, and of a thickness tapering from three-eighths to one-eighth of an inch, at the rate of from 7,000 to 10,000 per day, according to the nature of the wood. Timber is also cut up into laths four feet long, at the rate of from 60 to 100 per minute, by a circular saw attended by two men.

In these saw-mills, boards are sawn into "sidings," that is, long wedge-shaped boards for the sides or roofs of houses, by a circular saw, at the rate of 17 feet per minute. The board is introduced at the back of the saw, and moves in the direction in which it revolves. It thus cuts with the grain, and the strength of the cut assists the forward feeding motion of the board. Subdivision of manufacture is advantageously adopted as a system.

Many works in various towns are occupied exclusively in making doors, window-frames, or staircases, by means of self-acting machinery, such as planing, tenoning, mortising, and jointing machines. They are able to supply builders with the various parts of the woodwork required in buildings at a much cheaper rate than they can produce them in their own workshops without the aid of such machinery. In one of these manufactories, twenty men are employed making panelled doors at the rate of 100 per day. Portable sawing-machines, driven by horse-power, are commonly used for sawing up logs of wood for fuel, particularly at the various stations on the railroads, where the wood intended for the consumption of the locomotives is stored in piles.

The "horse-power machine" consists of a stout frame supporting a railway about seven feet long, on which run the rollers of an endless travelling platform. The axles of the rollers are of iron, five-eighths in diameter, stretching across the rails, and are connected together by a series of links, each about 12 inches long, so as to form an endless chain, which passes over a fixed segment at one end, and the chain wheels at the other. The travelling platform is made by planks of wood about 12 inches

broad, 1½ inch thick, fastened transversely to the endless chain. It is inclined at an angle of about 7° to the horizontal line, and the horse being placed on the platform pushes it backward from under him, which causes the chain-wheels at the end of the frame to revolve; and the motion thus obtained is conveyed to the circular saw or other machine required to be driven. Some horse-power machines are made to admit two horses abreast. These machines are found very useful to farmers; when requisite, they are mounted on wheels, and may be easily taken from place to place to saw up trees which could not conveniently be moved entire.

Numerous varieties of planing-machines are in common use. For flooring-boards, Woodworth's machine is found to answer very satisfactorily. In planing-mills at Philadelphia, four of them were working in one room side by side; they have three cutters on each horizontal axis, having a radius of six inches, and making 4,000 revolutions per minute. The cutters are said to be capable of planing from 2,000 to 3,000 feet of work without being sharpened with the oil-stone, and from 20,000 to 30,000 feet without being ground.

They plane boards 18 feet long, varying in width from 3 to 9 inches, at the rate of 50 feet per minute. At the same time that the face of the board is planed, it is tongued and grooved by cutters revolving with a radius of about three inches, on vertical axes on each side of the board.

The chips made by the four planing-machines are driven through large pipes, and fall into a trough about 20 inches wide, running across the room immediately under the cutters. In this trough works an endless chain, on which are fixed wooden scrapers that carry along the chips as they fall, to a recess at the side of the room. Here they are carried off by the scrapers of another endless chain running up an inclined plane. The pulleys on which this side-chain works are larger in dimensions than those of the transverse chain which works inside.

The transverse chain thus deposits its chips in the trough of the inclined plane, and they are carried up to a hole in the ceiling of the fuel-room, adjoining the boiler-house; through this hole they fall into the fuel-room, and fill it up, if necessary, to the top.

Where an accurately smooth surface is required, Daniel's planing-machine is employed. It consists of an upright frame, in which a vertical shaft revolves, having horizontal arms, at the ends of which are fixed the cutters. The work is carried along on a travelling bed under the cutters, which are driven at a very high speed.

In a box manufactory at Worcester, a machine, made on

Woodworth's principle, planed boards 10 inches wide simultaneously on both sides.

Boxes are made in great numbers, from boards which are tongued and grooved by what is called a "matching machine," and then put together as that operation is finished.

The tonguing and grooving cutters are fixed on horizontal axes, and the workman passes the boards alternately over one or the other, as the sides require to be tongued or grooved. Other varieties of planing-machines are also in use, known by the names of their different inventors: some of them have fixed vertical or horizontal cutters, others vertical or horizontal revolving cutters, and various other combinations, according to the purposes for which they are intended.

This machine makes 900 round spills, fifteen inches long, one-eighth inch diameter, per minute; so that if each spill were cut into five matches, each three inches long, 4,500 would be produced every minute.

The spills are cut from pieces of straight-grained timber, made of such a length as to pass between two grooved feeding-rollers, which hold the timber so that its under surface is level with the lowest parts of a row of tubular cutting tools, or long sharp-edged punches.

The cutting tools are thus arranged: five pieces of steel are fixed side by side in a horizontal bar. Each piece of steel is perforated with three long holes, lying close together, and having their ends sharpened like the cutting edges of a hollow punch. A line of fifteen tubular cutters is thus formed, and motion is given to the horizontal bar, in which they are fixed by a crank which impels them against the timber. This is depressed at each stroke sufficiently to allow each cutter to cut out its spill, which passes through and falls out behind.

The cost of this machine would not exceed £20, and when the number of matches, all nicely rounded, which it is capable of producing, is contrasted with the number which could be produced by a hand-instrument in the same time, it will serve as a simple and striking illustration of the advantageous employment of matter in the form of machinery to do the work of man.

A machine, constructed on Blanchard's principle, is used for making lasts.

A pattern last, and the block of wood from which another last is to be cut, are fixed upon, and revolve round a common axis, being connected with the centres of a headstock fixed on a frame made to oscillate from below. As the pattern revolves, it is kept continually pressed against a knob of iron by a spring, and as the block of wood revolves, it is shaped by a circular cutter, revolving on a fixed axis, with its cutting edges in a line

with the face of the knob. The pattern and the copy revolving simultaneously on a common axis as the surface of the pattern is pressed against the projecting knob, the oscillating frame is made to move, so that the revolving cutters shape from the block a surface exactly corresponding to the surface of the pattern, and the copy occupies relatively to the cutters the same position which the pattern does relatively to the knob of iron. About eighteen men are employed, who make 100 pairs of lasts per day, exclusive of boot-trees.

Labor-saving machines of all kinds, sawing, planing, boring, shaping, and jointing machines, are very advantageously employed in the manufacture of furniture. An apparatus of a very simple character is used for shaping the arms and legs of chairs. Two vertical cutters are made to revolve in opposite directions, at the rate of about 1,700 revolutions per minute, on axes projecting above a bench. The cutters are about four inches in diameter, and between them and the bench are loose washers or rollers, against which the pattern to which the work is fastened is pressed so as to guide the cut. The cutters revolve in opposite directions, and the work may be pressed against either one or the other, so as to suit the cut to the direction of the grain of the wood, without the workman having the trouble of reversing its position.

Labor-saving machines are most successfully employed in the manufacture of agricultural implements. In a plough manufactory at Baltimore, eight machines are employed on the various parts of the woodwork. With these machines seven men are able to make the wooden parts of thirty ploughs per day.

The handle-pieces are shaped by a circular cutter, having four blades, similar to those of smoothing-planes, fixed on a horizontal axis, with about two inches radius, and making nearly 4,000 revolutions per minute. The work to be shaped is fastened to a pattern, which is pressed against a loose roller on the axis of the cutter as the workman passes it along, and it is thus cut of exactly the same shape as the pattern.

All the ploughs of a given size are made to the same model, and their parts, undergoing similar operations, are made all alike. Some of the sharp edges of the wood are taken off or chamfered by a cutter revolving between two cones; these guide and support the work as it is pressed down edgewise on the cutters, and passed along by the workman.

The other machines in use consist of a circular and vertical saw, and machines for jointing, tenoning, drilling, and for making round stave rods, and giving them conical ends, the whole being of a simple and inexpensive character.

The curved handle-pieces of the ploughs, which require to be steamed and bent, are obtained already shaped from the forests where they are cut, and are advantageously supplied to the large

manufacturers. The prices of the ploughs vary from \$2½ to \$7, (10s. 6d. to 30s.)

In a manufactory at Buffalo, mowing machines are made in large numbers; one of these machines, drawn by two horses, can mow on an average six acres of grass per day.

The machine is similar in its construction to the common reaping-machine, but it has only one wheel, furnished with projections to prevent it from slipping. This wheel gives motion to the cutters, and support one side, the other rests on a runner like that of a sledge. It has a pole, to which two horses are attached in the ordinary way, and the driver sits on a seat fixed behind the cutters.

In an establishment at Worcester, 250 hands are employed principally in making ploughs, hay-cutters and churns.

Templates and labor-saving tools are used in the manufacture of these instruments, which are sold in very large numbers.

The churns consist of a double case, the inner one being of zinc, which receives the milk or cream, and in which the arms revolve, the outer one being of wood. It is found by experience that butter is formed most rapidly when the milk or cream is churned at a certain temperature; and in order to obtain this temperature, which is indicated by a thermometer inserted in the churn, warm or cold water is introduced between the inner zinc and outer wooden casing, as may be required.

Many of the carriages, especially those technically called "wagons," are made of an exceedingly light construction, and are intended generally to carry two and sometimes four persons.

Their wheels are frequently made with only two felloes, which are bent round by the operation of steaming, and are strengthened at the joining with iron clamps. The wheel of a carriage constructed to carry four persons had felloes only 1½ inch square. They are generally made of white oak, and the spokes are obtained ready shaped from shops where their manufacture forms a special trade.

It would seem as if the elasticity of these carriages peculiarly fitted them for the very bad roads on which they in general have to run, and it is evidently a principle with the Americans to use their light carriages and save their horses.

Every man in America who is able to keep his wagon is free to do so, unfettered and unquestioned, consequently their use is so general that it may be said to be almost universal. Their manufacture is one of great importance, and supports a vast number of wheelwrights and artisans of that class, who, from the nature of their employment, attain great skill and aptitude, enabling them to turn their hands to almost any variety of work, and rendering them a most useful and important class.

In an establishment at Washington, which has but recently

commenced operations, there are two planing-machines and a grinding or polishing machine. Considerable difficulties have hitherto attended the employment of machinery for planing stone such as granite, and stone of similar formation.

These difficulties have, however, been surmounted most successfully by the construction of planing-machines such as are used in stone-works in New-York and Washington, in the former of which upwards of 400 men and ten machines are employed. The planing-machine consists of an upright frame, in which revolves a vertical shaft, carrying three horizontal arms. At the extremities of these arms are fixed circular cutters, inclined outwards about 45° from the perpendicular, or about the angle at which the workman would hold his chisel. They are about 10 inches in diameter, and $\frac{3}{4}$ inch thick, made of steel, and bevelled on both sides, leaving a sharp edge. They are fitted upon axes, and are at liberty to revolve loosely in their bearings as their edges strike the stone. The cutters are carried round by the shaft at the rate of about eighty revolutions per minute when planing freestone, and sixty when planing granite. The stone is moved forward on a bed to which it is keyed; the cutters strike its surface obliquely as they are carried round on the revolving arms, turning at the same time on their own axes, and chipping and breaking off the projecting portions of the stone at every cut. The machine planes the face of a stone slab 4 feet long and 2 feet wide in seven minutes. Another modification of this machine, which is not so economical, is employed when it is necessary that the face of the stone be left in lines as it came from the tool. The stone is keyed on a travelling bed, and passed under a frame, in which works a sliding carriage driven by a crank; in this carriage is fixed the circular cutter at the required angle, and as the stone is carried along, the cutter is driven backwards and forwards across its face at right angles to the direction in which it moves, and chips off parallel breadths of stone at every cut. The cutters can be used for planing from 300 to 400 square feet of freestone surfaces, and about 150 square feet of granite, without being ground.

The stone is polished by a flat circular disc of soft iron, which is made to revolve horizontally. The axis of a disc is fixed at the end of a heavy frame, which moves round a strong centre shaft in a radius of about 12 feet.

The polishing disc revolves at the rate of 180 revolutions per minute. It is driven by a strap, to which motion is given by a driving pulley fixed on the centre shaft. The disc is guided, and its pressure regulated, by hand. It will polish about 400 square feet of surface in a day of ten hours.

A machine for making bricks from dry clay was in operation on Staten Island, about nine miles from New-York. The works

are carried on under extensive sheds, near the water side, and are connected with a wharf by a railway, which also extends to the bed from which the clay is dug. A large movable shed is erected on the bed of clay at the terminus of the railway.

In dry weather the clay is collected by slicing it from the surface with a kind of shovel, having a sharp edge, which is drawn by two horses, and will hold about two barrows.

In wet weather, the surface of the clay is harrowed to the depth of two or three inches, by a triangular wooden frame carrying nine teeth, a process which in the powerful rays of an American sun soon causes the moisture to evaporate. It is then taken off by the scoop or shovel above described, and conveyed to the shed, whence it is carried by rail to the machine shed. It is deposited close to a cylindrical screen, revolving on a fixed axis, which has projecting loose bars. The screen is about 8 feet long and 3 feet in diameter, and consists of bars $\frac{5}{8}$ inch square, riveted on two cast-iron wheels, which form the ends; the bars are about $\frac{1}{4}$ inch apart, and the clay is riddled through them. The screen is inclined, and the clay is fed in between the arms of the wheels, and as it revolves, the small pulverized particles fall through the bars, while the large stones pass out at the lowest end.

The clay is next raised by elevators, which are fixed to an endless leather belt about a foot wide, to the height of about 12 feet, and conveyed to rollers. It is ground and shovelled into hoppers which feed the moulds; these are 8 inches long, 4 inches wide, and 4 inches deep.

The clay is dropped into the moulds, which are placed six in a row to the depth of 3 to $3\frac{1}{2}$ inches, according to the quantity of moisture it contains, and is afterwards compressed to the thickness of 2 inches, in the following way:—

Six presses or rams, fixed in a heavy frame, are raised by a cam, and being allowed to fall, exert very great pressure by their impact on the clay. The blow is repeated, and then the bricks are powerfully compressed above and below by revolving cams: 36 bricks are made per minute. They are at once conveyed to the kiln, which is under the shed at a short distance from the machine.

After being burnt, they are separated into three shades of color, of lighter and deeper reds. The best burnt bricks are equal in quality to our best English stocks, and sell at \$12, equal to £2 8s. per 1,000.

In a brick-yard at Washington, Sawyer's machine, which had been in use for 16 years, makes about 1,800 bricks per hour from dry clay, by compression only.

The clay is obtained from a pit close by. As it is dug out, it

is carted up an inclined plane to the floor over the room where the machine is at work.

A roller weighing 1,600 lbs., and making 60 revolutions per minute, grinds it upon a grating through which the pulverized particles fall into the room below. There it is shovelled into a hopper which supplies the brick moulds by feed-pipes. Three bricks are made at one time, being compressed by top and bottom pistons or pressers, which are connected together by long iron rods, and from the top part are suspended levers, with toggled joints worked by cranks. The bricks are sold at the rate of \$6½ per 1,000, and are of a medium quality between English seconds and stock bricks.

India-rubber is applied to a great variety of purposes, and its manufacture is attended with very great success.

By a new process of hardening, the substance becomes of the consistency of horn. In that state it is manufactured into combs, walking-sticks, and other articles.

The India-rubber in its rough state is first cut up by shears into small pieces. It is then put through a machine similar to that used for tearing and cleaning rags intended to be made into paper. The water used in the operation is drawn off from time to time through a wire grating. The material, thus chopped up and cleaned, is passed through rollers, where it is sufficiently ground. It is then put through other rollers, where it is kneaded, and worked up with the necessary composition. The India-rubber, so mixed, is passed in the form of an endless web through four rollers placed vertically one above the other, and comes out a broad web fit for use. The India-rubber cloth is cut out from the sheet by workmen, in the shape required to form shoes. The parts so shaped are put together by women, who form them on lasts, closing the joints by cohesion after touching them with camphene. Each woman finishes an entire shoe, and about 1,400 pairs are made daily. The shoes are then covered with a coat of varnish, and taken to the stove drying-room, where they are subjected to a heat of from 250° to 280°, and allowed to remain a night. To provide for an equal distribution of heat in the drying-room, two large heating stoves are placed underneath, each in a separate compartment. These are fed with fuel from the outside, and the heat is admitted into the drying-room above, through several apertures pierced in the floor. Thermometers are placed at the side of the room, and can be inspected through glass from the outside.

The fishing-net machines combine the general features of the power-loom and the lace-machine.

They are made from 6 to 7 feet wide, according to the size of the mesh. One machine nets a ¾ inch mesh, and can be used for netting meshes of 1½ inch and 2¼ inches. It works at the

speed of 12 picks per minute, and a complete course of 100 knots is made in the width of this machine, at each pick of the shuttle.

One woman can do the work of upwards of 100 hand-netters. The meshes are made rectangular, in the direction of the length of the net, and not diagonally, as in hand-made nets. The cost of the machine is \$800 (about £160).

The manufacture of sailcloth is carried on in the mill where these machines are at work. The throstles for spinning yarn for the sailcloth spin six hanks to the pound. The carding-engine sliver is carried by the railroad system along a trough to the drawing-frame. The main cylinder of the carding-engine is 36 inches in diameter, and the doffing cylinder 13 inches, the former making 135 revolutions, and the latter 7 revolutions, per minute. In the fly-frame, the front roller makes 200 revolutions per minute, and the flyer from 1,900 to 2,000. By some ship-owners, sailcloth made of cotton is preferred to that made from hemp. Fishing-nets made by hand are here also manufactured of cotton.

The corn and flour mills of Pittsburgh employ 40 persons, including clerks and all others engaged in the various departments, and are capable of producing 500 barrels of flour per day, each containing 196 pounds.

The grain is brought in bulk in boats alongside the building, and is raised by an elevator consisting of an endless band, to which are fixed a series of metal cans revolving in a long wooden trough, which is lowered through the respective hatchways into the boat, and is connected at its upper end with the building where its belt is driven.

The lower end of the trough is open, and as the endless band revolves, six or eight men shovel the grain into the ascending cans, which raise it so rapidly that 4,000 bushels can be lifted and deposited in the mill in an hour.

The grain is next allowed to descend by a shoot or trough (the descent being regulated by traps) into a larger hopper, resting on the platform of a weighing-machine; its weight is then registered, and afterwards, by drawing a trap in the bottom of the hopper, the grain is allowed to descend by another shoot to a lower story. It is next raised by an elevator to the highest story of the mill, where it is cleaned by passing through three different machines. The greatest care and attention are bestowed on this process, in order to insure the perfect cleansing of the grain preparatory to being ground. The grain is then conducted to the stock-hoppers, which feed eight pairs of grinding-stones. A short length of the feeding-pipe of each pair is made of glass, through which the grain, as it descends, can be seen. The stones are 4 feet in diameter, and make 232 revolutions per

minute. The meal, when ground, is conveyed by means of a spiral conveyor to the cooling-chamber, where a rake, revolving horizontally, is substituted for the old "hopper boys." The meal is raked from the circumference to the centre, where it falls through a hole and is taken to the bolting-machine; it is there sifted, and separated into different qualities of flour. It is then conveyed to hoppers, from which it descends by spouts into the barrels in which it is packed.

Art. XIII.—INTERNAL IMPROVEMENTS.

THE following presents very nearly the facts with regard to this division of enterprise in the United States, as compared with other countries:

Number of miles of railroads existing in the United States in each year, since the period of their first introduction:—In 1828, 3 miles; 1829, 28; 1830, 41; 1831, 54; 1832, 131; 1833, 576; 1834, 762; 1835, 918; 1836, 1,102; 1837, 1,421; 1838, 1,843; 1839, 1,920; 1840, 2,167; 1841, 3,319; 1842, 3,877; 1843, 4,174; 1844, 4,311; 1845, 4,511; 1846, 4,870; 1847, 5,336; 1848, 5,682; 1849, 6,350; 1850, 7,355; 1851, 9,090; 1852, 11,631; 1853, 13,379; 1854, 17,317.

The following will show the present results of railroads and canals in the United States:—The funded debt of railroads, in 1853, was \$130,000,000, and their gross earnings \$38,356,632. A report of 2,356 miles of canals shows a total cost of \$54,676,936. There were, in 1853, 89 telegraphic lines, having 23,261 miles of wire. At present, the miles of wire may be estimated at over 30,000.

Railroads and Canals, 1854.

STATES.	CANALS. Miles.	RAILROADS.			
		Number.	Miles in Operation.	Miles in Construction.	Cost.
Alabama.....	51.....	6.....	221.....	659.....	\$3,636,208
Connecticut.....	61.....	15.....	669.....	83.....	20,857,357
Delaware.....	14.....	2.....	16.....	43.....	600,000
Florida.....	—.....	2.....	54.....	—.....	250,000
Georgia.....	29.....	15.....	894.....	445.....	16,084,872
Illinois.....	100.....	25.....	1,262.....	1,945.....	25,420,000
Indiana.....	367.....	18.....	1,127.....	748.....	22,400,000
Iowa.....	—.....	2.....	—.....	480.....	—.....
Kentucky.....	486.....	9.....	233.....	452.....	4,909,990
Louisiana.....	101.....	7.....	117.....	119.....	1,131,000
Maine.....	50.....	11.....	417.....	90.....	12,662,645
Maryland.....	184.....	3.....	597.....	30.....	26,024,620
Massachusetts.....	100.....	43.....	1,283.....	48.....	55,602,687
Michigan.....	—.....	4.....	601.....	—.....	13,842,279
Mississippi.....	—.....	4.....	155.....	436.....	3,070,000
Missouri.....	—.....	6.....	50.....	963.....	1,000,000
New-Hampshire..	11.....	15.....	512.....	24.....	16,185,254

STATES.	CANALS. Miles.	RAILROADS.			Cost.
		Number.	Miles in Operation.	Miles in Construction.	
New-Jersey.....	147.....	11.....	408.....	29.....	11,536,505
New-York.....	989.....	32.....	2,345.....	564.....	94,523,785
North Carolina...	13.....	3.....	249.....	223.....	4,106,000
Ohio.....	921.....	46.....	2,367.....	1,578.....	44,927,058
Pennsylvania...	936.....	64.....	1,464.....	987.....	58,494,675
Rhode Island.....	—.....	1.....	50.....	—.....	2,614,484
South Carolina...	50.....	9.....	575.....	374.....	11,287,093
Tennessee.....	—.....	9.....	388.....	695.....	7,800,000
Texas.....	—.....	1.....	—.....	72.....	—
Vermont.....	—.....	8.....	422.....	59.....	14,116,195
Virginia.....	189.....	21.....	673.....	1,180.....	12,720,421
Wisconsin.....	—.....	4.....	178.....	200.....	3,800,000
Total.....	4,798.....	396.....	17,317.....	12,526.....	\$489,603,128

In Great Britain 7,686 miles of railway in 1853 were open to traffic, and charters existed for 2,164 miles more; in 1850, 625 miles were opened; in 1853, 350 miles. Total capital invested, 1852, \$264,165,680. Total passengers conveyed, 102,283,660. Total receipts from all sources, \$18,635,879. In France, 1853, there were 4,070 kilometres (two-thirds of a mile, 1,093 yards of railroad) in operation, 1890 under construction, and 3,665 proposed. Dr. Lardner estimated the railroads opened in the world in 1845, 18,656, and in construction 7,829, with a total capital of about £500,000,000. A late French authority, 1854, states the miles of railroad in Europe to be 52,011 kilom., of which 45,589 were opened. The relation of the governments to each other with regard to railroads, and in proportion to territory, is expressed in the figures. France 0.77, Prussia 1.06, smaller German States 1.30, Belgium 3.06, Great Britain 3.91.

The number of miles of railway now in operation upon the surface of the globe is 35,480, of which 16,890 are in the eastern hemisphere, and 18,590 are in the western; and which are distributed as follows:

In the United States 17,317 miles, British Provinces 823, Island of Cuba 359, Panama 31, South America 60, Great Britain 7,686, Germany 5,340, France 2,480, Belgium 532, Russia 422, Sweden 75, Italy 170, Spain 60, Africa 25, India 100.

Art. XIV.—ADDRESS TO SUBSCRIBERS AND OTHERS.

1 DECEMBER, 1854.

WITH the issue of its next number, the REVIEW will have entered upon the *tenth year* of its existence.

It is but natural that there should come up in the mind of its Editor many reminiscences of the past, and that he should reck-

on with himself as to the part he has performed in all this period.

Without experience, without pecuniary means, without friends or influence, scarcely attained to the age of majority, he issued the prospectus of a monthly periodical, which was to be devoted to the development and maintenance of the industrial interests of the Southern and Western States, and in an especial manner to the defence of the rights and institutions of the South. It was a new field, in which there were no guiding lights, for no one had ever entered it before, and there was at once the necessity of creating a public taste for the researches to be prosecuted, and of creating, as it were, almost the very material which was to incite that taste. The position was one of difficulty. The odds were a hundred to one against success. Even the most ardent friends admitted it, and urged the fact as an argument against any movement whatever.

Strong in the faith, and with an energy which, alas, is stronger in youth than it is ever afterwards, we boldly entered the arena, and struggled for that success which involved the fortunes of a whole life. What difficulties were encountered, what obstacles removed, what embarrassments, what defeats, what hopes and what fears ensued, is within the knowledge of some of the old associates who will read this note, and whose sympathies and co-operations we have ardently had.

To have triumphed amid such circumstances must be a source of gratulation.

May we not appeal to the public for their verdict? Have we adhered to our pledges at the beginning? Has the development of the wealth and the power of the planting States been with us a cardinal purpose, and have we ever faltered in a bold and constant vindication of the rights of those States? Have we had a part in the advocacy of the plans of improvement in agriculture, manufactures, commerce, or internal improvement, which, in the last nine years, have sprung into life, and which have called together assemblings of our people in towns and counties, and in great conventions of many States—when has the REVIEW, or its Editor, been lukewarm upon such matters, and in what period of doubt or difficulty were they silent?

If the verdict is favorable, then are there other things that follow. Should the organ and advocate of such great and prosperous interests not share some of their results? Should the toil and labor of years, which in any other field would have brought with it fortune, not bring it in this? Should the planter or the manufacturer, the merchant or the railroad advocate, or shareholder deriving benefit, direct or even indirect, from the labors which have been performed, not cheerfully appropriate a modicum of that benefit to the support of those labors?

Citizens of the South—supporters of the REVIEW and all others, it is our desire and purpose to enter upon an entirely new era with the tenth volume of the work. Called eighteen months ago into another service, the opportunity was believed to be a good one to extend our capacity for usefulness, and at the same time to promote the great cause of development, to which so many years had been devoted. That mission performed, what remains is to resume with spirit and energy our conduct of the REVIEW, which has, to an extent, been interrupted.

From this point, then, we start afresh. With enlarged experience, with increased means, with facilities which were never enjoyed before, the REVIEW again presents itself. In its services the time and efforts of its Editor will be expended. Additional and able contributors will be secured. There will be an increase in size of the work—a greater diversity of subjects, a closer attention to matter, and a wider field of illustration. Neither money nor labor will be spared upon the work, nor anything that will commend it to the support and confidence of our people. The Editor will resume, for the most part, his position at New-Orleans, establishing a branch office of the work at Washington.

There is but one appeal to be made. Will our friends stand by us in the movement? *Will each one promptly, and if possible without waiting for the call of agents, remit the amount of his liability; and also, where it can be done with a little pains or influence, send on the name and subscription of some other person, not now upon our books—some neighbor or some friend?* This service will be deeply and gratefully remembered and reciprocated.*

* An able exchange paper speaks strongly to the South in favor of encouraging its own publications: a brief extract will be excused us in this note:—

"How many praiseworthy efforts of Southern men to conduct literary magazines have you discouraged and crushed in the bud, by negligence or sneering criticism! How many devoted enthusiasts at the shrine of letters have you permitted to wear out life and strength in unavailing struggles to promote the interests of our own literature! Let the waste paper receptacles of every post-office in the South declare. 'But,' says the supporter of Abolition prints, 'these were "catch-penny affairs," which merited no man's patronage, and they met with the fate which they deserved.' Now, one of the following positions is true, and the other, of course, is false: either our periodicals are poor because they are not supported; or, they are not supported because they are poor. Suppose the latter to be true; why, then, are they poor? 'Because,' answers our opponent, 'they are managed by inefficient men.' The assertion is false—utterly, unqualifiedly false. Will any one pretend to say that 'William Gilmore Simms' has a superior in the South, in the conduct of a literary work? Yet, his abilities are expended on a 'labor of love.' Will any one deny to Professor De Bow his well-earned reputation, for the management of his REVIEW? Yet, when will 'De Bow's REVIEW' equal the Southern circulation of Harper's Magazine?"

ART. XV.—EDITORIAL NOTICES.

Treatise on Sociology. This is a curiously metaphysical work, the production of Henry Hughes, we believe, of Mississippi. Time has not admitted our examination of it, and therefore we are not prepared for any opinion. There are probably but few persons who can bestow upon such a volume the study which it requires, but then books are not to be estimated by the number of their readers. The object of the author is to work out philosophically and express some of the views of the Southern people upon the subject of slavery. The style of the work is sententious, and its logic without ornament. Taylor and Maury, Washington.

The Western Home, and other Poems. By Mrs. L. H. Sigourney. Philadelphia: Parry & McMillan. 1854. Washington: Taylor & Maury. The volume embraces poems never before published, and also some selections from the illustrated octavo edition of Mrs. Sigourney's poems, and also poems that have hitherto been published, but not collected together.

The Monthly Nautical Magazine and Quarterly Review. Griffiths & Bates, 79 John-street, New-York. It is most remarkable that in the history of American literature, no magazine has before appeared devoted to the science of marine architecture, nautical engineering, and maritime pursuits, seeing that the prosperity of the country is absolutely involved with our maritime growth. Up to the present time but a single author (worthy of note) has undertaken to write upon the subject of ship-building in the United States, and to his practical as well as scientific knowledge, our ship-owners as well as builders owe much of the meed of praise which has been awarded to American ships throughout the world. When Mr. Griffiths left the sterner realities of construction and took up the pen and pencil, an impulse was at once given to ship-building, which has been felt in every land of commercial notoriety. Not content with past achievements in the publication of two standard works, we see by the periodical forming the subject of this notice that he has associated himself with Mr. Bates, a gentleman of similar stamp, for the publication of a Magazine adapted to the wants of ship-builders, masters and owners, and all others who aspire to be such. A more comprehensive view of the subject of which it treats could not well be given. The arrangement of subjects under different heads or departments, each appropriately illustrated, is an entire new feature in the history of magazines. It is not only instructive, but interesting, and takes rank among the first periodicals of the day, presenting as it does data on the construction of vessels, engines of steamers, in their proportion and performance, as well as the logs of and disasters to vessels, in the Nautical Department, in connection with the state of the market in Ship Stock, &c. The articles on the loss of the Arctic, the subject of Tonnage, and Inland Navigation, are worthy the attention of all interested.

Our Exchanges. Hereafter it is the intention of the Editor of the REVIEW to notice the several periodicals which are sent to him monthly, and to give the titles of some of their leading articles. At present only a mere reference can be had to the *Banker's Magazine* of Mr. Homans, which is one of the most valuable statistical works in the country; the *Southern Quarterly Review*, which keeps up its character under the administration of Mr. Simms; the *Southern Literary Messenger*; the *Western Journal*, St. Louis; the *Soil of the South*; the *Alabama Cotton Planter*, all able and valuable works. The *New-Orleans Medical Journal*, under Dr. Dowler, and the *Charleston Medical Journal*, preserve their high rank. The *Western Democratic Review*, published at Indianapolis, and edited by Geo. P. Buck, \$3 per annum, monthly, is marked by great ability, and is eminently entitled to the support of all who admit and practise the doctrines of that great and influential party.

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